

Commercial Vehicle Enforcement System Strategic Plan

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Washington State
Department of Transportation



CDM
Smith

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CHAPTER 1: INTRODUCTION AND OVERVIEW

Introduction

The Commercial Vehicle Enforcement Systems (CVES) Strategic Plan is a joint undertaking of the Washington State Department of Transportation (WSDOT) and the Washington State Patrol (WSP). In January 2016, the State Legislature-directed study, *Efficiency and Effectiveness of Weigh Site Management in Washington State* (Cambridge Systematics, Inc.) was completed. It recommended that a joint statewide inspection system plan be developed. WSDOT and WSP then commissioned CDM Smith to work with them to implement the recommendation. This CVES Strategic Plan is the result of that work.

According to the December 2016 *WSDOT Truck Parking Study*, Washington is the most trade dependent state in the U.S. on a per capita basis, and trucks carry almost two-thirds of the total freight tonnage in the state. As such, it is in Washington's best interest to continue to effectively and efficiently oversee the ever-increasing commercial vehicle operations on its highway network. In essence, **this Strategic Plan presents Washington's approach for continuing effective and efficient commercial vehicle enforcement that provides safe highway operations, protects basic highway infrastructure (pavement and bridges), and promotes the economic vitality of freight movement in the state.**

Purpose of Commercial Vehicle Enforcement Systems Strategic Plan

Commercial vehicle enforcement is one of Washington's many transportation priorities. As such, the approach to obtaining funding for CVES infrastructure improvements must be thorough and rigorous in order to compete with funding requests for other transportation improvements. CVES infrastructure improvement funding requests must stand the tests of value, effectiveness, and efficiency that all transportation activities in the state face.

To this end, the threefold purpose of the CVES Strategic Plan is to:

1. Delineate Washington's operational approach to commercial vehicle enforcement – its "Concept of Operations." WSDOT and WSP will use the Concept of Operations as a road map for carrying out commercial vehicle oversight to maximum benefit for the state;
2. Establish the straightforward, logical decision-making process that is used to identify commercial vehicle infrastructure needs and prioritize those needs for implementation. This process should be replicated periodically to update infrastructure needs and priorities so that they accurately reflect the changing requirements and current landscape of commercial vehicle operations in the state. WSDOT and WSP will use the results generated by this process to prepare funding requests for the State Legislature; and,
3. Present the Infrastructure Action Program generated by the initial use of the previously described decision process. The Infrastructure Action Program consists of:

- a. An Improvement Plan that identifies and prioritizes projects that improve and augment existing infrastructure.
- b. A Preservation Program that identifies and prioritizes projects needed to maintain and preserve existing infrastructure.

Organization of Commercial Vehicle Enforcement Systems Strategic Plan

The CVES Strategic Plan is organized as follows:

- **Chapter 1** introduces the Strategic Plan, and provides an overview of commercial vehicle enforcement in Washington – including mission, responsibilities, opportunities and challenges, and a description of the existing enforcement system infrastructure.
- **Chapter 2** provides an overall strategic framework for the Strategic Plan including Key Performance Indicators and the actions needed to achieve stated goals and objectives.
- **Chapter 3** presents Washington's Concept of Operations which identifies the types of enforcement facilities that Washington intends to use, the components and capabilities of each of those facilities, and operational scenario examples. The Concept of Operations also describes both current and future information technology systems that can enable effective use of the facilities. Section 3 also includes a decision tool which includes the logical process that can be used to identify which type of facility is best suited for an enforcement need.
- **Chapter 4** discusses the process used to determine the criticality or importance of a facility within the context of Washington's commercial vehicle enforcement systems.
- **Chapter 5** defines the commercial vehicle enforcement facility needs considering: 1) the condition of existing facilities; 2) the functionality of existing facilities; and, 3) the need for additional facilities to optimize coverage of the state's roadways.
- **Chapter 6** identifies the projects that are needed to meet the needs identified in Chapter 5. Planning level cost estimates for each project and the prioritization of the projects, based on criticality and functionality or condition, are also provided. Chapter 6 also presents the resultant Improvement Plan and Preservation Program.
- **Chapter 7** delineates initial steps for implementing the Strategic Plan. The activities needed to update and administer the Strategic Plan are also presented.

Mission of Commercial Vehicle Enforcement in Washington

The mission of commercial vehicle enforcement in the state is to:

- ***Provide as safe an operating environment as possible*** for all highway users by eliminating or minimizing unsafe commercial vehicles and assuring that commercial vehicle drivers are qualified and operate per driver rules – especially with regard to rules on hours of service.

- **Protect vital transportation infrastructure**, namely pavement and bridge structures.
- **Promote the economic vitality of the state** by making the road system as efficient as possible for commercial vehicle operations, particularly on strategic freight corridors.

These broadly stated aims are described in more detail in **Chapter 2 – Strategic Planning Framework**. In essence, commercial vehicle enforcement addresses safety, infrastructure preservation, and operating efficiency.

Commercial Vehicle Enforcement Roles and Responsibilities

In general, WSDOT is responsible for the construction of the electronic (e-Screening) system, maintenance of roadway-related facility elements, and ongoing operation and maintenance of the software applications that enable operation of the enforcement facilities. WSDOT interacts with the Federal Highway Administration (FHWA) and the Federal Motor Carrier Safety Administration (FMCSA) in the constant communication of vehicle and driver information and for project development. WSP is responsible for day-in/day-out commercial vehicle weight enforcement and safety inspections, maintenance of facility buildings and the enforcement hardware (excluding e-Screening computers), and historically has identified biennial needs for facility upgrades or additions in memos to the State Legislature. The nature and content of agency responsibilities and interactions, particularly focusing on the interagency *Memorandum of Understanding (MOU, May 2011)* and the *Joint Operations Policy Statement* (most recent update in September 2016), are defined in more detail in Tech Memo #2 – *Existing Conditions, Performance and Gaps* (See **Appendix A**).

Commercial Vehicle Enforcement Challenges and Opportunities

The success of commercial vehicle enforcement in Washington requires that WSDOT and WSP work together to meet the challenges of their operations and take advantage of opportunities that are available and will facilitate or improve their operations. The current challenges and opportunities are described in the following sections.

Challenges

- Aging enforcement facility infrastructure that is functionally obsolete and/or in poor physical condition. A fixed facility is a dedicated location that includes a static scale and some area to inspect trucks. The average age of the fixed facilities is about 38 years. **Figure 1-1** presents a sample of sites where age is apparent.
- Staffing shortfall. WSP staffing has fallen short of authorized positions. At present, almost 20 percent of authorized staff positions are unfilled in the two major enforcement groups, the Motor Carrier Safety Division (MCSD) and the Commercial Vehicle Division (CVD).
- Insufficient funding. Funding is currently insufficient to meet facility improvement demands and staffing requirements. Competition for limited funding is not expected to decrease in the foreseeable future. Like many public-sector activities, commercial vehicle enforcement must be accomplished by doing more with less.
- Software support. Support for the current enforcement software may be limited in the future.

Opportunities

- Technology. Use new technology that will more effectively and fully serve the mission of commercial vehicle enforcement. The broader concept is to do more with less, using technology to enable staff to accomplish more. In effect, the technology acts as a personnel “force multiplier.”
- Software. Maintain and update the software systems used for commercial vehicle enforcement to yield a nimble and effective platform.
- Shared strategic approach. Implement an integrated strategic approach that takes into account the planning and budgeting procedures of WSDOT combined with the enforcement demands of WSP to ensure a safe and well-protected highway network.
- Transparent decision making. Provide more transparency in decision making that is directed towards improving system performance by optimizing use of funding and minimizing infrastructure lifecycle costs.

Figure 1-1: Sample of Commercial Vehicle Enforcement Systems Sites



Existing Commercial Vehicle Enforcement Systems

In the late 1950s, Washington began installing commercial vehicle enforcement facilities in response to ever-increasing freight movement via trucks (commercial vehicles). From a handful of sites, commercial vehicle enforcement grew to a point where there are now 60 operating facilities statewide. These facilities comprise a major component of the state's commercial vehicle enforcement system and consist of:

- Eleven (11) fixed sites with electronic screening called “e-Screening” facilities, five of which are Ports of Entry (POE). A POE is staffed 24 hours per day to provide full weighment (vehicle weigh-in) and inspection capabilities, and four of the five are near entry points to the state.
- Thirty-three (33) fixed sites with a static scale and some type of administration building. These fixed facilities have weighment and safety inspection capabilities.
- Five (5) fixed sites with only a fixed scale to which an enforcement officer connects a lap top computer to conduct weighments. These are called “plug and run” facilities. Safety inspections may also be conducted at a nearby facility.
- Nine (9) designated “mobile sites” where commercial vehicle enforcement officers conduct weighments and limited safety inspections.
- Two (2) Virtual Weigh-in-Motion (VWIM) facilities. VWIM sites are standalone unstaffed locations where weight and other vehicle data are collected and used to target enforcement, or screen trucks in advance of a weighment location. VWIMs are expected to be an increasingly important component of Washington's commercial vehicle enforcement systems.

Figure 1-2 shows the locations and **Appendix B** includes additional information about each of the facilities. The WSDOT permanent traffic recorder sites conduct continuous classification counts and provide fairly accurate WIM weighments of commercial vehicles (within 10 to 15 percent of true gross vehicle weight). These sites are for data collection only and are not used for direct enforcement, but the data collected is provided to WSP for targeted enforcement.

Information Management is the final component of the commercial vehicle enforcement systems. It includes the information technology systems and software applications needed to support the facilities and WSDOT classification stations (permanent traffic recorder sites). Current primary software applications include:

- The Commercial Vehicle Roadside Information Sorting System (CRISS) software application, developed by WSDOT (around 2001) to manage and administer the enforcement system as a part of the state's Commercial Vehicle Information Systems and Networks (CVISN) implementation. CVISN is a joint public-private platform that provides electronic screening and enables targeted commercial vehicle enforcement.
- The Commercial Vehicle Information Exchange Window (CVIEW) is a repository and store-and-forward system. Commercial vehicle data, carrier credentials, and safety information are received from the Washington Department of Licensing, the FMCSA Safety and Fitness Electronic Records (SAFER) system, and WSDOT's transponder administration. CVIEW

then forwards the data to roadside controllers for electronic screening and to other states via SAFER.

- The SAFER system, a FMSCA application that provides electronic records of company safety data over the internet.

Other items include communications and connectivity, internet use, and data storage and management. **Chapter 3** provides more detail on CVES Information Management elements.

Related Documents and Relationships to Commercial Vehicle Enforcement Systems Strategic Plan

This Strategic Plan lies within the context of transportation planning, implementation, and maintenance/operations in the State of Washington. Commercial vehicle enforcement supports and is supported by the many faceted transportation activities in Washington. **Table 1-1** summarizes other major transportation documents and their relationship to the CVES Strategic Plan.

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Washington State Department of Transportation
Washington State Patrol

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ABBREVIATIONS:
Port of Entry (POE); Virtual Weigh-in-Motion (VWIM);
Weigh-in-Motion (WIM)

WSDOT Classification Station with WIM
WSDOT Classification Station with VWIM
Mobile Weigh Site
Fixed Weigh Station
Fixed Weigh Station with eScreening

Direction of Station/Site
Interstate
U.S. Highway
State Route

MAP
LEGEND

0 10 20 40
Miles

ABBREVIATIONS:
Port of Entry (POE); Virtual Weigh-in-Motion (VWIM);
Weigh-in-Motion (WIM)

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Table 1-1: Transportation Documents Related to the Commercial Vehicle Enforcement Systems Strategic Plan

PLAN OR DOCUMENT	WEB LINK	RELATION TO CVES STRATEGIC PLAN
<i>Washington Transportation Plan</i> (2016-2017)	https://washtransplan.com/	Sets general policy, emphasizes funding (including tolling and RUC – technology integration with truck enforcement possible) and reliable and efficient freight movement, preservation and maintenance, and safety.
<i>WSDOT Highway System Plan</i> (2007)	http://www.wsdot.wa.gov/planning/hsp.htm	Outlines state system, near-term and medium-term needs and plans, basis for budget requests for state roads, roadway and bridge weight restrictions for preservation, and weigh station replacement and rehabilitation.
<i>Washington State Freight Mobility Plan</i> (October 2014)	http://www.wsdot.wa.gov/Freight/freightmobilityplan.htm	Objectives include developing urban goods movement system, maintain Washington as a competitive global gateway, support rural economies including manufacturing, and resource sectors.
<i>Washington State Truck Parking Study</i> (December 2016)	http://www.wsdot.wa.gov/NR/rdonlyres/A72C532D-B825-4757-B4BE-F00ABF93A6D6/0/TruckParkingStudyFinal.pdf	Reviews supply and demand for truck parking statewide at a mid- to high-level, highlighting the need for a good deal more facilities.
Efficiency and Effectiveness of Weigh Station Management in Washington State (January 2016)	http://leg.wa.gov/JTC/Documents/Studies/Weigh%20Station 2015/FinalReportWeighStationStudy_January2016.pdf	Initial study of existing Washington CVES facilities for the Washington Legislature Joint Transportation Committee (JTC). Makes ten (10) recommendations for improving enforcement including development of a joint agency statewide inspection station system plan, a recommendation that led to preparation of this CVES Strategic Plan.
Results WSDOT Strategic Plan Brochure (2015)	https://www.wsdot.wa.gov/about/secretary/results-wsdot	Defines goals for WSDOT which include strategic investments for preservation and maintenance, asset management, safety, and smart technology.
WSDOT Statewide Intelligent Transportation Systems (ITS) Plan (2009)	https://www.wsdot.wa.gov/partners/prtpo/docs/materials/ITSPan32409.pdf	Identifies near-term and long-term ITS needs, identifies specific projects, notes key investments needed in expanding communications abilities to deliver real-time information to WSDOT and partner agencies and the public, and notes CVISN system used in weigh enforcement though does not provide detail.
WSDOT Design Manual (2016)	http://www.wsdot.wa.gov/Publications/Manuals/M22-01.htm	Contains sections on design for weigh station and inspection facilities including permanent facilities, portable facilities, and shoulder sites.
Washington State Patrol Strategic Plan (2014-2019)	http://www.wsp.wa.gov/publications/reports/2014-2019_wsp_strategic_plan.pdf	WSP planning document includes increasing size, weight, and load enforcement using data to target/plan enforcement actions and facilities, continue program using weigh scales to identify defective equipment, use ALPRs to identify high risk carriers, discusses need to replace aging enforcement facilities, mentions CVISN in terms of research, implementation, and improvements. Discusses overall budgets. Mentions sustaining agency technology including expanding network bandwidth and storage.

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CHAPTER 2: STRATEGIC PLANNING FRAMEWORK

The Strategic Planning Framework (the Framework) provides the overall guidance and direction for the development and implementation of the Commercial Vehicle Enforcement Systems (CVES) Strategic Plan in support of the mission of commercial vehicle enforcement in Washington. The Framework links the **mission** to measurable **goals** and the major **actions** required to achieve the goals. The framework is shown in **Figure 2-1**.

Mission of Commercial Vehicle Enforcement

The mission of commercial vehicle enforcement in Washington is threefold and for the purposes of the CVES Strategic Plan is stated as follows:

1. Ensure Safe Operations of Commercial Vehicles.
2. Preserve the State's Highway Infrastructure.
3. Support Economic Vitality through Maintaining Freight Mobility.

An overview of each of the elements of the mission follows in terms of benefits.

Safe Operation of Commercial Vehicles. Truck safety inspections and driver regulation compliance checks (including rules for hours of service) are conducted with the goal of reducing the number/severity of crashes and hazardous material incidents involving commercial vehicles.

Infrastructure Preservation. Commercial vehicle operations on the state's highway network are expected to continue to increase. Overweight and poorly loaded trucks can escalate pavement degradation. Over-height vehicles can strike bridges and cause damage to the bridge structure. Commercial vehicle enforcement is conducted to keep overweight, poorly loaded, and over-height trucks from traveling on the state's highway system in order to preserve the highway system infrastructure. Additionally, the infrastructure directly associated with commercial vehicle enforcement is aging and must be managed to minimize lifecycle costs.

Maintaining Freight Mobility. Commercial vehicle enforcement activities are to be conducted to make the highway system as efficient as possible for commercial vehicle operations, particularly on strategic freight corridors. Precluding compliant drivers and vehicles from unnecessary enforcement activities contributes to highway system efficiency by focusing on potentially noncompliant trucks. Conducting enforcement activities with minimal delay to commercial vehicles also contributes to highway system efficiency.

Figure 2-1: Strategic Planning Framework

Mission	ENSURE SAFE OPERATIONS OF COMMERCIAL VEHICLES	PRESERVE THE STATE'S HIGHWAY INFRASTRUCTURE	SUPPORT ECONOMIC VITALITY THROUGH MAINTAINING FREIGHT MOBILITY
Goals	<ul style="list-style-type: none"> ▪ Eliminate Unsafe Trucks ▪ Optimize Safety Inspection in Enforcement Process ▪ Include Safe CVES in Highway System Planning and Design 	<ul style="list-style-type: none"> ▪ Eliminate Unpermitted Trucks ▪ Eliminate Over-height Trucks ▪ Provide and Maintain Required CVES Infrastructure 	<ul style="list-style-type: none"> ▪ Keep Compliant Trucks on the Mainline ▪ Process Trucks Effectively and Efficiently through Enforcement System
Actions	<ul style="list-style-type: none"> ▪ Locate and Characterize CVES Assets to Optimize Coverage ▪ Design Assets to Facilitate Safety Inspections ▪ Update Design Manual Regularly to Reflect Current CVES Standards & Needs ▪ Use VWIM to Focus Enforcement 	<ul style="list-style-type: none"> ▪ Locate and Characterize CVES Assets to Optimize Coverage Considering Vulnerability ▪ Use VWIM to Focus Enforcement ▪ Implement Asset Management Program for CVES Infrastructure 	<ul style="list-style-type: none"> ▪ Improve Screening Accuracy to Focus on Potentially Non-Compliant Trucks ▪ Decrease Truck CVES Processing and Delay Time

Goals

The goals included in the Framework directly support the achievement of the mission. The goals are measurable, and performance metrics are provided that enable measuring progress towards meeting the goals. Performance metrics are defined by Key Performance Indicators (KPIs) and targets for the KPI. The KPIs and targets have been established based on pertinence to the goals and the ability to collect and process the data needed to quantify the respective metric. As discussed in **Chapter 7**, KPIs and targets should be evaluated and updated on an ongoing basis as additional data becomes readily available. **Table 2-1** provides the KPIs established for each of the goals in the Framework.

Actions

The actions included in the Framework will support achievement of the goals in support of the mission. Initial and ongoing activities that will ensure success of the Strategic Plan are included in Chapter 7 – Strategic Plan Implementation and Updates.

Table 2-1: Performance Metrics for Commercial Vehicle Enforcement Goals

Mission Element	Goal	Key Performance Indicator (KPI)	Target	2017 Assessment
Ensure Safe Operation of Commercial Vehicles	Eliminate Unsafe Trucks	Unsafe Trucks as a Percent of Number of Trucks Screened	0%	*
	Integrate Safety into Enforcement Process	Number of Truck Safety Incidents Statewide	0	*
	Include Safe CVES in Highway System Planning and Design	Enforcement Facilities Design Criteria included in <i>WSDOT Design Manual</i> and Regularly Updated	Yes	Partially
Preserve the State's Highway Infrastructure	Eliminate Unpermitted Overweight Trucks	Overweight Trucks as a Percent of Total Number of Truck Weighments	0%	*
		Total Truck VMT Passing Open Facilities as a Percent of Total State Truck VMT	85%	*
	Eliminate Over-Height Trucks from Vulnerable Areas	Number of Bridge Strikes	0	22/year
		Over-Height Trucks as a Percent of Total Number of Trucks Measured at Facilities for Vulnerable Areas	0%	*
	Provide and Maintain Required CVES Infrastructure	CVES Infrastructure Investment Plan Exists and Regularly Updated	Yes	Partially
		CVES Infrastructure Prioritization Plan Exists and Regularly Updated	Yes	Partially
		CVES Infrastructure Asset Management Program Exists and Regularly Updated	Yes	No
Support Economic Vitality through Maintaining Freight Mobility	Keep Compliant Trucks on the Mainline	WIM Correspondence to Static Weights (percent in acceptable range)	100%	*
		Fixed Facilities with e-Screening as a Percent of Total Number of Fixed Facilities	100%	22% (11 of 49)
		Compliant Trucks Processed at a Facility as a Percent of the Total Number of Trucks Processed at a Facility	Equal to or Slightly Less Than Percent Random Vehicles Checked	*
	Process Trucks Effectively and Efficiently through Enforcement System	Average Truck Processing Time by Weighment/Inspection Process	TBD	*
		Number of Carrier Complaints per Facility	0	*

* Unavailable. See Chapter 7 discussion.

CHAPTER 3: CONCEPT OF OPERATIONS

Scope and Development Basis

Scope

This chapter covers the Concept of Operations for the Commercial Vehicle Enforcement Systems (CVES). A Concept of Operations is a document describing the characteristics of proposed facilities and systems from the viewpoint of individuals and agencies who will use them. It communicates the quantitative and qualitative system characteristics to all stakeholders covering the variety of facilities that may be used for data collection and enforcement. The descriptions include facility types that exist today, as well as possible future facilities. Each type of facility addresses different concerns, can be used for different types of enforcement, and has varying capacity. Included also are sample scenarios of facility applications to specific site situations plus related planning and design considerations.

To set the stage for the Concept of Operations, the following section summarizes current trends and developments in commercial vehicle enforcement based on project Tech Memo #1 – *Best Practices for Washington State* (see **Appendix C**). A summary of Tech Memo #1 follows.

Commercial Vehicle Enforcement Trends and Best Practices

Tech Memo #1 covers national practices in commercial vehicle enforcement programs pertaining to truck regulations, permits, and operator regulations. It addresses the federal and state government roles in commercial vehicle enforcement, state government approaches to enforcement, funding systems, and technology employed.

Federal Role

State governments initiated roadway preservation and safety regulations long before the federal government established such rules. The federal government got involved with the advent of the Eisenhower Interstate System in 1956. These regulations are designed to reduce crashes and maintenance costs caused by poorly loaded and overweight trucks.

The Federal Highway Administration (FHWA) and Federal Motor Carrier Safety Administration (FMCSA) are responsible for safeguarding the expenditure of billions of dollars invested in highway infrastructure and ensuring public safety. FHWA is responsible for certifying state compliance with federal standards. FMCSA's mission is to reduce crashes, injuries, and fatalities involving trucks.

Federal rules set national weight, length, and width standards on the U.S. roadway system. States set their limits within these standards for that system, may set more permissive standards off the system, and may have grandfathered limits on the system that exceed federal rules.

The federal government does not have enforcement personnel at the state level. The state enforces all federal regulations related to trucking activities through their own state statutes that mirror the federal regulations.

Safety inspection criteria have been established under federal regulation in the United States, as well as federal regulation in Canada and Mexico. The implementation of those regulations is carried out by the Commercial Vehicle Safety Alliance (CVSA). This alliance is multi-national and is honored by all three nations.

The work of both federal administrations, FHWA, and FMCSA, is augmented by the National Highway Traffic Safety Administration (NHTSA), which has responsibility for safety rules related to vehicle manufacturing.

Current Practices

The agencies assigned responsibility for truck size and weight (TSW) vary from state to state. Many states assign the capital responsibilities to their department of transportation while operations are controlled by the state patrol/police. Some have specific joint units responsible for the entire TSW program while others assign it to the department of transportation and leave operational safety to the state patrol.

Truck size and weight enforcement primarily happens throughout the United States using fixed weigh stations and mobile enforcement units. A new approach, Virtual Weigh-in-Motion (VWIM), is starting to become an important enforcement tool.

Fixed Enforcement Stations

Fixed station facilities are typically located along major trucking routes, mostly along the interstate system. Typical technology used in fixed TSW enforcement today includes electronic static scales



and Weigh-in-Motion (WIM) pre-screening systems. Most states have some locations with advanced technology designed to improve enforcement accuracy, throughput, and capabilities. These include pre-screening systems with dimensional measuring, automatic vehicle

identification, automatic signaling systems, VWIM locations, and pre-clearance systems. Automatic pre-screening has significantly reduced the number of vehicles needing to be weighed by static scales, increasing station throughput and effectiveness over time.

Mobile Enforcement

Nearly all states use some form of mobile enforcement and some use only mobile enforcement approaches. Mobile enforcement usually comprises standard dimensional measuring devices and portable scales, but also can include networked technology to access state databases, state summary information, and even access mainline VWIM data in real time to assist in selection of vehicles to inspect.



Within Washington State, enforcement for truck size and weight, as well as safety, takes place throughout the state, whether through a fixed enforcement facility or a mobile enforcement operation. Both operations are focused on truck safety and size and weight. Tech Memo #2 (see **Appendix A**) provides additional information on Washington enforcement practices.

Emerging Technology

The use of WIM technology and over-height detection has led to greater enforcement power for individual enforcement personnel and agencies by letting this equipment capture weight and size information automatically. These tools allow agencies and operations managers to set specific limits as to when trucks should be brought into an inspection facility for further review at fixed locations and allow individual enforcement officers to make decisions in the field when conducting mobile enforcement. The tools also allow accumulation of vehicle data for determining target areas for additional enforcement and, with vehicle identification, allow for compliance reviews with carriers at a later date.

The federal government has led the effort for encouraging the use of technology. With the advent of the Intelligent Transportation Systems (ITS) program in 1995, the FMSCA established a program called Commercial Vehicle Information Systems and Networks (CVISN). CVISN has three component parts: driver credentials, central records systems, and electronic screening and transponder bypass systems. This program encouraged private industry to develop technology that would help both public and private entities move forward with their joint missions. Today many states have used this program, including Washington. The program has recently been renamed Innovative Technology Deployment (ITD), but this document continues using the name CVISN since it is widely used and understood in practice. Washington has been active in CVISN since about 2000 having developed a custom software known as the Commercial Vehicle Roadside Information Sorting System (CRISS). Washington's IT systems for enforcement are discussed further below.



Currently, direct enforcement can only be conducted on fixed and portable scales. Many states and associated industries are working on better tools to keep compliant trucks from having to be weighed. WIM technology is being developed with enough accuracy to allow direct enforcement where courts will accept violations from these devices. Also, enforcement of overweight trucks can be more efficiently conducted if permit information becomes part of the roadside record. Most states require a review of paperwork through an enforcement stop.

One of the federal rules that states have agreed to enforce is a methodology for identifying trucks avoiding enforcement detection. This can consist of roaming patrols on known bypass routes or permanent truck classification sites on bypass routes that provide

time of day and day of week truck counts used for enforcement decisions.

Technology is now available that includes, at a minimum, WIM sensors that may be supplemented with other sensors for vehicle dimensions and brake operations, plus a camera license plate reader to link data to specific trucks and carriers. The collected data is transmitted over the internet to enforcement officers in squad cars and weigh/inspection stations, thus no personnel are onsite at the sensor site, the key difference from a WIM. This configuration is known as Virtual Weigh-in-Motion, or VWIM.

VWIM applications can include carrier compliance reviews, mobile and long-range enforcement strategy, and direct use in real time by enforcement personnel to screen trucks. Florida, for example, has a VWIM design that is used for bypass detection and is monitored by troopers in

their vehicles. VWIMs can be paired with pullout sites for troopers to conduct enforcement responsibilities, and Washington is now using VWIM on SR 290 in the Spokane area and on I-90 at the Columbia River. The main point is that VWIM technology offers the opportunity to monitor truck operations over a wide area with a greatly reduced staff commitment. Resulting operations increase the coverage and effectiveness of size and weight screening for optimum enforcement.

Funding Programs

Funding for Commercial Vehicle Enforcement comes through several federal, state, and local channels. Federal Aid Highway Program (FAHP) funds come to states through an allocation formula. Some of those funds may be used to administer the Truck Size and Weight program. Additionally, federal funds help to pay for the safety enforcement of trucks through the Federal Motor Carrier Safety Administration's (FMCSA's) Motor Carrier Safety Assistance Program (MCSAP). Federal funds also flow through CVISN, Performance and Registration Information Systems Management (PRISM), and Congestion Mitigation Air Quality (CMAQ) grants. States can take advantage of all those grant programs to help with commercial vehicle enforcement. States often provide capital and operating funds to state agencies through their regular budgeting processes. Finally, local jurisdictions may not directly provide funding to state-level programs, but provide local safety enforcement and can partner in providing suitable locations for enforcement.

It should be noted that Chapter 47.05 of the Revised Code of Washington (RCW; Priority Programming for Highway Development) states the following:

"It is the intent of the legislature that investment of state transportation funds to address deficiencies on the state highway system be based on a policy of priority programming having as its basis the rational selection of projects and services according to factual need and an evaluation of life cycle costs and benefits that are systematically scheduled to carry out defined objectives within available revenue." (RCW 47.05.010)

In practical terms, this means that the state needs to take a logical approach to identifying needs and prioritizing improvements on the road system. WSDOT and WSP must abide by this directive to make CVES projects eligible for state funding.

Lessons for Washington Commercial Vehicle Enforcement Systems

Washington is in a similar situation to most states. A combination of fixed facilities of varying ages and mobile enforcement can meet the federal requirements. However, funding can be hard to find. Application of existing and emerging technology can help expand the enforcement program at lower costs. Finding synergies between WSDOT and WSP systems and programs, such as the conversion of WSDOT count locations with VWIM systems for direct WSP use, can help address both capital and operational funding limits.

Better program management might be addressed through stronger ties between WSP and WSDOT working together to develop the enforcement plan approach and execution, as is being done with this Strategic Plan. This Plan for enforcement facilities and systems is a first important step towards the advanced planning needed to fit within standard transportation planning processes that lead to capital and operational funding both from state and federal programs.

Facility Types

The project team, in coordination with WSDOT and WSP, has developed facility types to address various enforcement conditions. The facility types have resulted from ongoing discussions, in

particular a project workshop held at WSDOT headquarters in Olympia in late February 2017. Tech Memo #1 summarized above also was an important input for developing facility types.

Basic Characteristics

Table 3-1 identifies 15 facility types in rows, while the columns list the basic characteristics of a facility. The corresponding cells summarize how each facility type addresses the associated characteristics. The facility types are grouped into four categories as shown on the left of the Table.

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Table 3-1: Facility Types

	DESCRIPTION	ID	OVERVIEW	OPERATING PERIOD	LOCATION	TRUCK SCREENING	TRUCK FLOW	EQUIPMENT	AUTHORITY	DATA COLLECTION
Fixed-Assigned Staff	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	F-1	Large facility designated to provide a full suite of commercial vehicle enforcement services. Likely to include truck operator rest parking and comfort station.	24 hours per day/7 days per week.	Selected based on key entry points into the state, including along major routes from adjoining states and Canada, and at locations where trucks enter or are consolidated in the roadway system and truck volumes are high enough to justify facility investment.	Possible overweight/ overheight trucks by e- Screening, plus randomly selected trucks, are directed to the facility.	Trucks directed to facility using DMS and/or in-cab transponders. Auto-weighment combines e- Screening results with automated scale functions such that system can automatically stop the truck on the scale, determine if on scale properly, weigh it, determine if in compliance and automatically release, or determine if out of compliance and hold for officer review/citation issuance. Auto- weighment increases throughput by allowing officers to focus on vehicles flagged with an issue.	Fixed scale, scale house, and administration building with officer restrooms and offices/desks; inspection building. Site, building, and equipment maintained by WSP except for roadway features maintained by WSDOT. e-Screening system with in pavement count, classification, weight sensors, overheight sensors, AVI, and in-cab transponder communications, data equipment and cabinet, data system backhaul network connection, CVISN connections.	Officers can issue weight fines and require load changes. Officers can perform Levels 1-3 inspections and issue citations. Officers can place trucks out of service for excessive weight and/or safety issues.	e-Screening provides continuous vehicle class, weight, vehicle identification information, and safety score in real time and by month, day of week, hour of day, and direction. Data is downloaded to WSDOT headquarters. Reports are generated for WSDOT and WSP which can provide information for reporting and planning additional enforcement such as a large proportion of overweight trucks or a higher number of trucks than expected. Data may also indicate what time of day/day of week violations peak. Summary reports on weighments and citations issued by scale location for state and federal reporting purposes. Using summary data with vehicle identification, frequent overweight trucks can be noted in carrier review letters.
	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	F-2	e-Screening system sends only probable overweight, over-height and randomly selected vehicles to the scale, allowing the facility to focus on potential violators for maximum efficiency. Facility includes inspection building for Level 1-3 inspections, particularly where environmental conditions make outdoors inspections difficult, or truck configurations require a pit to safely conduct inspection. Scale operator directs trucks to inspection facility as needed. May include truck operator rest parking.	When staffed.	Selected based on temporary traffic recorder with WIM study, long-term need, truck consolidation points, known bypass routes, near vulnerable structures, etc. and with sufficient truck volumes to justify fixed scale and e- Screening. Site environ- mental conditions or truck configurations may call for inspection building.	When open, possible overweight/ overheight trucks by e-Screening, plus randomly selected trucks, are directed to the facility.	Same as F-1	Same as F-1 except may not include administration building	Same as F-1	Same as F-1
	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	F-3	e-Screening system sends only probable overweight, over-height and randomly selected vehicles to the scale, allowing the facility to focus on potential violators for maximum efficiency. May include truck operator rest parking.	When staffed.	Selected based on temporary traffic recorder with WIM study, long-term need, truck consolidation points, known bypass routes, near vulnerable structures, etc. and with sufficient truck volumes to justify fixed scale and e- Screening.	Same as F-2	Same as F-1	Fixed scale, scale house, likely officer restroom. Site, building, and equipment maintained by WSP except for roadway features maintained by WSDOT. e-Screening system with in pavement count, classification, weight sensors, overheight sensors, AVI, and in-cab transponder communications, data equipment and cabinet, data system backhaul network connection, CVISN connections.	Same as F-1	Same as F-1
	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	F-4	Fixed scale with scale house for weight, size, and safety enforcement.	When staffed.	Selected based on temporary traffic recorder with WIM study, long-term need, truck consolidation points, known bypass routes, near vulnerable structures, etc., and with sufficient truck volumes to justify a permanent scale.	When open, all trucks are directed to the scale and weighed.	Static or DMS open/closed signs.	Fixed scale, scale house, possible officer restroom or porta-potty, equipment for conducting Level 1, 2, and 3 inspections. Site, building, and equipment maintained by WSP except for roadway features maintained by WSDOT.	Same as F-1	Summary reports on weighments and citations issued by scale location for state and federal reporting purposes. Can also be used for future enforcement planning.
Mobile	MOBILE ENFORCEMENT (NO INFRASTRUCTURE)	F-5	Truck weight, size, and safety enforcement using mobile WSP Commercial Vehicle Division Officers at any location.	Can operate anytime and anywhere.	Target specific areas such as bypass routes, areas near major construction sites, areas near resource extraction industries, and areas where other data indicates overweight truck proportions may be moderate to high.	Trucks are selected for further enforcement based on Officer training and experience.	Officer escort trucks selected for weighing and/or inspection to parking areas including wide pull-off spots, specific mobile weigh and inspection locations, parking lots, or to a nearby fixed weigh facility if within a reasonable distance.	Officer vehicles have portable weigh scales devices, WSP computer system access, manual measuring devices, and tools for Levels 1-3 inspection such as mechanic's creeper. Equipment maintained by WSP or its vendors.	Same as F-1	Summary reports on mobile enforcement weighments and citations issued by CV officers for state and federal reporting purposes. Can also be used for future enforcement planning.
	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	F-6	Data collection site for weight and vehicle identification data using VWIM, may include overheight detection. Officer picks convenient/safe location for weighments and/or inspection. Real-time data feed available to WSP vehicles via internet for truck weight, size, and safety enforcement selection, a feature of all VWIM (F-6, -8, -10 & -11). Typically more accurate weight than F-14 but only 1 direction.	VWIM operations 24 hours per day/7 days a week, enforcement when staffed.	Selected based on temporary traffic recorder with WIM study, long-term need, truck consolidation points, replacement of former fixed facilities, known bypass routes, and conversion of existing permanent traffic recorder locations.	VWIM real time data feed notes probably overweight vehicles to assist officer in selecting which trucks to stop for further enforcement.	Officers escort trucks selected for weighing and/or inspection to appropriate areas including wide pull-off spots, specific mobile weight and inspection locations, parking lots, or to a nearby fixed weigh facility if within a reasonable distance.	VWIM: in pavement count, classification, and weight sensors, overview camera, controller & cabinet, and data system backhaul network connection. VWIM system maintained by WSDOT or its vendors. Officer vehicles have portable weigh scales, CVISN computer system access, access to VWIM real time information, manual measuring devices, tools for Level 1 inspection such as a mechanic's creeper. On vehicle equipment maintained by WSP or its vendors.	Same as F-1	VWIM provides continuous vehicle class, weight, and vehicle identification information in real time and by month, day of week, hour of day, and direction. Data is downloaded to WSDOT headquarters. Reports are generated for WSDOT and WSP which can provide information for reporting and planning additional enforcement such as a large proportion of overweight trucks or a higher number of trucks than expected. Using summary data with vehicle identification, frequent overweight trucks can be noted in carrier review letters.

Table 3-1: Facility Types

	DESCRIPTION	ID	OVERVIEW	OPERATING PERIOD	LOCATION	TRUCK SCREENING	TRUCK FLOW	EQUIPMENT	AUTHORITY	DATA COLLECTION
Fixed-Unassigned Staff	e-SCREENING; REMOTE SITE WITH FIXED SCALE; AUTO-WEIGHTMENT & KIOSK	F-7	Fixed scale facility with automatic screening system and remote operated kiosk to provide weight enforcement and simplified Level 2-3 inspections. WSDOT data collection site for weight and vehicle identification data using e-Screening, may include overheight detection.	e-Screening operations 24 hours per day/7 days per week for data collection, enforcement when staffed from remote control location such as WSP headquarters or POE facility.	Selected similar to traditional weigh station facilities at important locations with sufficient truck volumes, truck consolidation points, bypass routes, known overweight areas, and for protection of vulnerable resources, but at locations that are hard to staff because they are a long distance from population centers or hard to get to due to frequent inclement weather.	e-Screening used to sort trucks suspected of being overweight/over-height, or randomly selected to enter facility.	DMS directs trucks into facility when open and when capacity is available.	e-Screening system with pavement count, classification, and weight sensors, overheight sensors, AVI, and in-cab transponder communications, data equipment and cabinet, data system backhaul network connection, CVISN connections. e-Screening system maintained by WSDOT or its vendors. Multiplatform scale typically with automatic on scale detection, automated vehicle hold and release signage system, kiosk for communications with vehicle operator.	Can issue excess weight fines, can conduct Level 3 inspection, may require truck to hold until officer can arrive to perform other functions such as Level 1 or Level 2 inspection.	e-Screening provides continuous vehicle class, weight, vehicle identification information, and safety score in real time and by month, day of week, hour of day, and direction. Data is downloaded to WSDOT headquarters. Reports are generated for WSDOT and WSP which can provide information for reporting and planning additional enforcement such as a large proportion of overweight trucks or a higher number of trucks than expected. Data may also indicate what time of day the remote site should be operated, and when staffing the site with an officer may be needed. Summary reports on weighments and citations issued by scale location for state and federal reporting purposes. Using summary data with vehicle identification, frequent overweight trucks can be noted in carrier review letters.
	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	F-8	Trucks screened by VWIM. Fixed scale location without scale house but with static scale for truck weight, size, and safety enforcement.	When staffed.	Selected based on temporary traffic recorder with WIM study, long-term need, truck consolidation points, truck volumes, known bypass routes, or replacement/ conversion of fixed scale facilities & scale house.	VWIM used to sort trucks suspected of being overweight/over-height, or randomly selected to enter facility when facility is open.	DMS directs selected trucks into facility. System will not direct trucks into site if facility is full.	VWIM: in pavement count, classification, and weight sensors, overview camera, controller & cabinet, and data system backhaul network connection. VWIM system maintained by WSDOT or its vendors. Officer vehicles have scale interface computer, access to VWIM real time information & CVISN computer system, manual measuring devices, and tools for Level 1 inspection such as a mechanic's creeper. On vehicle equipment maintained by WSP or its vendors. On vehicle equipment maintained by WSP or its vendors.	Same as F-1	Same as F-6
	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	F-9	Same as F-8 except no VWIM screening.	Same as F-8	Same as F-8	All (or most) trucks required to enter the facility when it is open per CV Officer direction.	Manual sign or DMS directs trucks into facility.	Same as F-8 except no VWIM.	Same as F-1	Summary reports on weighments and citations issued by scale location for state and federal reporting purposes. Can also be used for future enforcement planning.
	VWIM; PULL-OFF SITE WITH STORED SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	F-10	Fixed facility using VWIM to direct trucks into site for truck weight, size, and safety enforcement. Portable scales stored onsite in a cabinet and deployed when in operation. WSDOT data collection site for weight and vehicle identification data using VWIM, may include overheight detection.	VWIM operations 24 hours per day/7 days a week, enforcement when staffed.	Same as F-9	Same as F-8	Same as F-8	Portable weigh scale with officer interface stored in cabinet onsite and cabinet may include inspection tools. Weighing and inspection equipment maintained by WSP or its vendors. VWIM has in pavement count, classification, and weight sensors, overview camera, data equipment and cabinet, and data system backhaul network connection. VWIM system maintained by WSDOT or its vendors.	Same as F-1	Same as F-6
	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	F-11	Same as F-6 but VWIM is located upstream of a nearby designated pull off site for weighments and/or inspection. Generally, this provides safer location for truck weighments and inspections than F-6 and provides for better truck static weighment throughout since escort distance is shorter.	Same as F-6	Same as F-6	Same as F-6	Officer or Dynamic Message Sign (DMS) directs truck to pull-off site, assuming available capacity.	Same as F-6	Same as F-1	Same as F-6
	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	F-12	Same as F-11 but no VWIM. Pull-off site for weighments and/or inspection. Generally, this provides safer location for truck weighments and inspections than F-5/6.	Can operate anytime and anywhere.	Target areas near pull off where data or experience indicate overweight truck proportions may be moderate to high.	Trucks are selected for further enforcement based on Officer training and experience.	Officer escort trucks selected for weighing and/or inspection to pull-off spots, or possibly to a nearby fixed weigh facility if within a reasonable distance.	Officer vehicles have portable weigh scales devices, WSP computer system access, manual measuring devices, and tools for Levels 1-3 inspection such as mechanic's creeper.	Same as F-1	Summary reports on mobile enforcement weighments and citations issued by CV officers for state and federal reporting purposes. Can also be used for future enforcement planning.

Table 3-1: Facility Types

	DESCRIPTION	ID	OVERVIEW	OPERATING PERIOD	LOCATION	TRUCK SCREENING	TRUCK FLOW	EQUIPMENT	AUTHORITY	DATA COLLECTION
Data Collection	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS	F-13	WSDOT traffic recorder operated 24/7 to collect information about vehicles traveling interstate and state routes. Covers both directions.	24 hours per day/7 days a week.	WSDOT plans locations based on federal reporting requirements and state data needs.	No trucks are selected for further enforcement. All vehicles are counted.	No vehicles are removed from the mainline.	In pavement count and classification sensors, data equipment and cabinet, and data system backhaul network connection. System maintained by WSDOT or its vendors.	No citations or out of service actions can be taken.	Provides vehicle class information, typically FHWA 13 classes, by month, day of week, hour of day, and direction. Data is downloaded to WSDOT headquarters. Reports are generated for WSDOT and WSP which can provide information for planning additional enforcement such as an increase in trucks at a specific location.
	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM	F-14	WSDOT traffic recorder operated 24/7 including WIM to record classification and weight. Covers both directions. WIM accuracy slightly less than VWIM.	24 hours per day/7 days a week.	WSDOT plans locations based on federal reporting requirements and state data needs, but may also add to include enforcement facility bypass routes, truck consolidation points, and other important locations.	No trucks are selected for further enforcement. All vehicles are counted and weighed.	No vehicles are removed from the mainline.	In pavement count, classification, and weight sensors, data equipment and cabinet, and data system backhaul network connection. System maintained by WSDOT or its vendors.	Same as F-12	Provides vehicle class and weight information by month, day of week, hour of day, and direction. Data is downloaded to WSDOT headquarters. Reports are generated for WSDOT and WSP which can provide information for reporting and planning additional enforcement such as a large proportion of overweight trucks or a higher number of trucks than expected.
	TEMPORARY TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM	F-15	WSDOT traffic recorder operated 24/7 including WIM to record classification and weight during a set review period such as 2 months. Used to identify appropriate level of enforcement and Facility Type.	24 hours per day/7 days a week, for at least two months.	Temporary installation by WSDOT as requested by WSDOT or WSP to target areas where there may be overweight truck issues or to gather basic data for planning purposes. May include bypass routes, areas near major construction projects, areas near major resource extraction operations, vulnerable infrastructure locations such as weight- limited bridges, deteriorating pavement sections, and other locations.	No trucks are selected for further enforcement. All vehicles are counted and weighed.	No vehicles are removed from the mainline.	In pavement count, classification, and weight sensors, data equipment and cabinet, and data system backhaul network connection. System maintained by WSDOT or its vendors.	Same as F-12	Provides vehicle class and weight information by month, day of week, hour of day, and direction. Data is downloaded to WSDOT headquarters. Reports are generated for WSDOT and WSP which can provide information for planning additional enforcement such as a large proportion of overweight trucks or a higher number of trucks than expected. Reports from temporary facility may indicate need for mobile enforcement, a permanent VWIM facility, or a fixed enforcement facility.

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Facility Operational Features

Table 3-2 provides information on operations and how they are accomplished at each of the facility types. The facility types are now listed in columns across the top. Row descriptions follow.

Screening Trucks

- Visual
 - Officers use their training and experience to select which trucks to subject to weighment and inspections.
- VWIM
 - VWIM is used to screen trucks by weighing trucks and allowing mobile enforcement officers to review the data in real time and then select trucks for static weighment typically using portable scales.
 - Consists of load cell or piezo-quartz sensors, overview camera, potential automatic vehicle identification in the form of automated license plate/DOT number/transponder reader, associated control and data processing equipment, and data backhaul network interface (wired or wireless).
 - Weight thresholds for selection for static weighment and random selection for general review can be set to differing levels.
- E-Screening
 - E-Screening is used to screen trucks by weighing trucks prior to static weighment upstream of a fixed scale facility.
 - Consists of piezo-quartz sensor, automatic vehicle identification in the form of automated license plate or DOT number reader, transponder reader, overview camera, over-height measurement or detection, associated control and data processing equipment, and data backhaul network interface to the CVISN system.
 - Can transmit “bypass” / “report” station signals to truck cab transponders when appropriate.
 - Weight thresholds for selection for static weighment and random selection for general review can be set to differing levels.

All Trucks Required to Report to Facility?

- Fixed facilities without upstream screening performs weighments on all trucks when open.
- Lack of screening limits detracts from effectiveness by sending compliant trucks to be weighed.

Truck Flow Management

- Truck flow can be managed through increasing levels of automation.

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Table 3-2: Facility Operations

FACILITY TYPE	FIXED - ASSIGNED STAFF				MOBILE	FIXED - UNASSIGNED STAFF							DATA COLLECTION		
	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	MOBILE ENFORCEMENT (NO INFRA-STRUCTURE)	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	e-SCREENING; REMOTE SITE WITH FIXED SCALE; AUTO-WEIGHMENT & KIOSK	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE WITH STORED SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM	TEMPORARY TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM
	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	F-12	F-13	F-14	F-15
OPERATIONS															
Screening Trucks	eScreening (2)	eScreening (2)	eScreening (2)	n/a	Visual (Officer Training/ Experience)	VWIM	eScreening (2)	VWIM	n/a	VWIM	VWIM	Visual (Officer Training/ Experience)	n/a	n/a	n/a
All Trucks Required to Report to Facility?	No	No	No	Yes, when open	No	No	No	No	Yes, when open	No	No	No	n/a	n/a	n/a
Truck Flow Management	Signage when open, Auto-Hold & Auto-Release	Signage when open, Auto-Hold & Auto-Release	Signage when open, Auto-Hold & Auto-Release	Signage when open	Escort	Escort	Signage when open, Auto-Hold & Auto-Release	Signage when open	Signage when open	Signage when open	Signage when open	Escort	n/a	n/a	n/a
Weighment Type for Enforcement	Fixed Scale	Fixed Scale	Fixed Scale	Fixed Scale	Portable Scale (1)	Portable Scale (1)	Fixed Scale	Fixed Scale	Fixed Scale	Stored Semi-portable Scale	Portable Scale (1)	Portable Scale (1)	n/a	n/a	n/a
Weighment for Enforcement	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	n/a	n/a	n/a
Safety Inspection															
Level I (includes under truck)	indoors	indoors	outdoors	outdoors	find location / outdoors	find location / outdoors	outdoors (5)	outdoors	outdoors	outdoors	outdoors	outdoors	n/a	n/a	n/a
Level II (no under truck)	indoors	indoors	outdoors	outdoors	find location / outdoors	find location / outdoors	outdoors (5)	outdoors	outdoors	outdoors	outdoors	outdoors	n/a	n/a	n/a
Level III (driver only)	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	basic inspection	n/a	n/a	n/a
WIM/VWIM Data Collection	Class, Weight, Height, AVI	Class, Weight, Height, AVI	Class, Weight, Height, AVI	n/a	n/a	Class, Weight, License Plate	Class, Weight, Height, AVI	Class, Weight, License Plate	n/a	Class, Weight, License Plate	Class, Weight, License Plate	n/a	Class only	Class and Weight	Class and Weight - Two month duration
Class	Load Cell or Piezo-quartz Sensors	Load Cell or Piezo-quartz Sensors	Load Cell or Piezo-quartz Sensors	n/a	n/a	Piezo-quartz Sensors	Load Cell or Piezo-quartz Sensors	Piezo-quartz Sensors	n/a	Piezo-quartz Sensors	Piezo-quartz Sensors	n/a	Axle sensors	Piezoelectric Sensors	Piezoelectric Sensors
Weight	Load Cell or Piezo-quartz Sensors	Load Cell or Piezo-quartz Sensors	Load Cell or Piezo-quartz Sensors	n/a	n/a	Piezo-quartz Sensors	Load Cell or Piezo-quartz Sensors	Piezo-quartz Sensors	n/a	Piezo-quartz Sensors	Piezo-quartz Sensors	n/a	n/a	Piezoelectric Sensors or Bending Plate	Piezoelectric Sensors or Bending Plate
Overview Camera	Yes	Yes	Yes	Optional	n/a	Yes	Yes	Yes	n/a	Yes	Yes	n/a	n/a	n/a	n/a
Automatic Vehicle Identification (3)	ALPR and transponder	ALPR and transponder	ALPR and transponder	n/a	n/a	ALPR	ALPR and transponder	ALPR	n/a	ALPR	ALPR	n/a	n/a	n/a	n/a
Measure Height (3)	Height Detector / Over-height DMS	Height Detector / Over-height DMS	Height Detector / Over-height DMS	Manual or Height Detector	Manual	Optional Height Detector/ Over-height DMS	Height Detector / Over-height DMS	Optional Height Detector/ Over-height DMS	Manual	Optional Height Detector/ Over-height DMS	Optional Height Detector/ Over-height DMS	Manual	n/a	n/a	n/a
Measure Width and Length (3)	Optional Automatic	Optional Automatic	Optional Automatic	Manual	Manual	Manual	Possible Automatic	Manual	Manual	Manual	Manual	Manual	n/a	n/a	n/a
Determine Brake Temperature (4)	Optional	Optional	Optional	Optional	n/a	n/a	Optional	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Truck Operator Rest Parking	Large # of spaces / with facilities	Large # of spaces / with facilities	Medium # of spaces / possible facilities	Medium # of spaces / possible facilities	n/a	n/a	Few spaces / no facilities	Few spaces / no facilities	Few spaces / no facilities	Few spaces / no facilities	Few spaces / no facilities	n/a	n/a	n/a	n/a

(1) Portable scales may require one or two personnel to setup and operate and require multiple weighments per truck. Certain technolgis, such as wireless operation between scale equipment and controller / display, can reduce time and manpower needs.

(2) Currently, escreening only covers right lane or right and center lane in most instances. Future upgrades and facilities should cover all lanes for additional data collection even when station is closed. A DMS will be needed to direct trucks to the right lane prior to screening when station open so they can enter the facility easily.

(3) Function may also inform sort/screen process and/or trigger safety inspection process.

(4) Not currently used in Washington.

(5) Only when enforcement officer present.

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- Lowest level flow management is through officer escort to weighment location which takes a relatively long amount of the officer's time.
- Static and electronic signage can guide trucks into facilities:
 - Static signage and electronic signage can be used to indicate a weigh station is open and all trucks must enter the facility.
 - Electronic signage attached to VWIM or e-Screening systems can signal likely weight-compliant drivers to bypass the facility, and signal likely overweight truck drivers to report to the downstream facility.
- Auto-Hold & Auto-Release (not currently used in Washington).
 - When combined with electronic signage and VWIM or e-Screening data, the system can automatically tell truck drivers if they are properly on the scale, if they are cleared to proceed after a weighment, or if they must hold to speak to an officer after a weighment. Reduces workload of station operators.

Weighment Type for Enforcement

- Weighments usually include total weight, axle weight, and bridge formula (axle group) weight calculations.
- Portable Scales are used for roaming enforcement and at fixed locations where volumes are low. They may be stored in officer vehicles or in cabinets at specific locations with sufficient room to set them up and perform the weighment.
- Fixed Scales are used where truck volumes are sufficiently high to justify the expense of installing and maintaining them. They have a higher throughput than portable scales.
 - Single platform scales usually measure each axle or axle group and additional dimension information (axle spacing) is entered into the system for bridge formula calculations.
 - Multiplatform scales are designed to measure axle groups and then perform bridge calculations. They typically have a higher throughput than single platform scales. Washington today uses one and two platform scales in part due to the wide variety of axle configurations in use.
- Multiple fixed scales in additional weighment lanes can be used at facilities with very high truck weighment volumes, if needed.

Weighment for Enforcement

- Weighments (weighing of stopped truck) are used to determine statutory weight compliance and issue citations when needed. WIMs and VWIMs cannot be used for direct enforcement.
- However, at WIM and VWIM sites with automatic vehicle identification, repeat offenders may be highlighted in trucking company review letters and meetings.

Safety Inspection

- Safety inspections are defined by the Commercial Vehicle Safety Alliance¹ (CVSA).
- Inspection Levels I, II, and III can take place at enforcement facilities as noted in **Table 3-2**. Levels IV, V, and VI are unlikely to be conducted at enforcement facilities.
- Locations where many inspections are performed and climate conditions (such as cold temperatures, hot temperatures, wind, and rain) are a factor benefit from having enclosed facilities with a pit for under vehicle inspection.
- Level I – North American Standard Inspection
 - Examination of driver's license; medical examiner's certificate and Skill Performance Evaluation (SPE) Certificate (if applicable); alcohol and drugs; driver's record of duty status as required; hours of service; seat belt.
 - Vehicle inspection report(s) (if applicable); brake systems; coupling devices; exhaust systems; frames; fuel systems; lighting devices (headlamps, tail lamps, stop lamps, turn signals and lamps/flags on projecting loads); securement of cargo; steering mechanisms; suspensions; tires; van and open-top trailer bodies; wheels, rims and hubs; windshield wipers; emergency exits and/or electrical cables and systems in engine and battery compartments (buses); and HM/DG requirements as applicable.
 - Includes examination of items from underside of vehicle
 - HM/DG (Hazardous Materials / Dangerous Goods) required inspection items inspected by certified HM/DG inspectors.
- Level II – Walk-Around Driver/Vehicle Inspection
 - Includes all items in Level I, except it is contemplated that the walk-around driver/vehicle inspection will include only those items which can be inspected without physically getting under the vehicle.
- Level III – Driver/Credential Inspection
 - Includes examination of the driver's license; medical examiner's certificate and Skill Performance Evaluation (SPE) Certificate; driver's record of duty status; hours of service; seat belt; vehicle inspection report(s); and HM/DG documentation requirements as applicable.

WIM/VWIM Data Collection

- Class – type of sensor to determine which of the FHWA 13 vehicle classes a detected vehicle is.
- Weight – type of sensor to estimate weight for screening purposes.

¹ <http://cvsa.org/inspections/inspections/all-inspection-levels/>

Overview Camera

- Side of road camera captures picture of truck to aid officers in identifying which truck may need enforcement.

Automatic Vehicle Identification

- Automatic Vehicle Identification (AVI) can be broken down into four systems: Automatic License Plate Readers (ALPR), DOT number readers, cellular-based applications, and transponder readers.
- AVI uniquely identifies each truck tractor so that weight and other information can be associated with it for further processing.
- AVI information can be integrated into enforcement systems such that other data in the system on the specific vehicle can be recalled, such as previous weight and inspection results as well as vehicle ownership and registration.
- Automatic License Plate Reader (ALPR) – Use cameras which can read truck license plates and optical character recognition to identify trucks by the license plate.
- DOT number readers - Use cameras which can read truck DOT number and optical character recognition to identify tractor by the unique DOT number.
- Transponder reader – Reads tractor-mounted transponder to uniquely identify tractor.
- Cellular-based applications – Use geo-fencing techniques that locate and uniquely identify tractors by tapping cellular and GPS based information.

Measure Height

- Height measurements are important to avoid bridge and tunnel strikes.
- Height measuring can take place either manually with a measuring device, automatically using threshold measurement (measures truck to see if it is over a set height), or automatically by measuring the actual height (which may be advantageous when working with over-height permits).
- For trucks that are found to be over-height by automatic systems, automatic over-height signals are typically employed to warn the truck driver that the vehicle is over-height and the information is displayed to the enforcement station operator if the truck is at such a facility.

Measure Width and Length

- Measuring width and length is important for safe roadway operation. Length typically includes axle spacings.
- While automatic measuring of width and length is possible, it is less common than height measurement. Manual measurement is more common.
- At high volume fixed facilities, it may be economical to employ automatic systems.

Determine Brake Temperature (not currently used in Washington)

- Brake temperature can indicate if a truck's brakes are operating improperly, either too hot (overheated) or cold (not functioning).
- Brake temperature is not readily apparent upon visual inspection of a truck.
- To measure brake temperature, a braking action needs to take place.
- Automatic brake temperature readers can be employed on ramps leading to inspection facilities after trucks brake to flag trucks with probable brake issues for further inspection.

Truck Operator Rest Parking

- Truck operator rest parking is in addition to truck parking needed for regular enforcement activities.
- Truck parking availability at appropriate locations throughout trucking corridors is important for operator and public safety so that drivers do not exceed allowed service hours.
- The new requirement that all operators use Electronic Logging Devices (ELDs) and increasing truck traffic in Washington likely will result in more truck operators seeking parking to meet regulatory requirements for rest.

Larger enforcement facilities provide good locations for truck parking when located where truck parking can be accommodated since infrastructure for needed utilities and restroom facilities is likely already in place.

Facility Capacity and Staffing

Table 3-3 provides information on facility capacity and staffing. Row descriptions follow.

In Operations (Data Collection)

- Describes the period when typically in operation.
- Most data collections sites operate 24/7.

In Operations (Generally When Staffed)

- Describes the period when location is staffed (or remotely staffed in the case of F-7).
- While only POEs are described as being staffed 24/7, facilities F-2 through F-4 and F-7 may also be staffed full-time.

Table 3-3: Facility Capacity and Staffing

FACILITY TYPE	FIXED - ASSIGNED STAFF				MOBILE		FIXED - UNASSIGNED STAFF						DATA COLLECTION		
	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	MOBILE ENFORCEMENT (NO INFRA-STRUCTURE)	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	e-SCREENING; REMOTE SITE WITH FIXED SCALE; AUTO-WEIGHMENT & KIOSK	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE WITH STORED SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM	TEMPORARY TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM
	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	F-12		F-13	F-14
CAPACITIES															
In Operations (Data Collection)	24/7	24/7	24/7	--	--	24/7	24/7	24/7	--	24/7	24/7	--	24/7	24/7	24/7
In Operations (Generally When Staffed)	24/7	PART TIME	PART TIME	PART TIME	PART TIME	PART TIME	PART TIME OR 24/7	PART TIME	PART TIME	PART TIME	PART TIME	PART TIME	--	--	--
Maximum Trucks Processed for Weighments per Hour	90	80	80	80	2	2	45 TO 90	15 OR 30	15 OR 30	2 OR 6	2 OR 6	2	--	--	--
Trucks Processed for Inspection per Hour	3 OR 4	3 OR 4	1 OR 2	1 OR 2	1	1	1 OR 2 (when staffed)	1 OR 2	1 OR 2	1 OR 2	1 OR 2	1	--	--	--
Pull-in Rate During 8-Hour Shift	720	640	640	640	8 TO 16	8 TO 16	360 TO 720	120 TO 240	120 TO 240	8 TO 48	8 TO 48	8 TO 16	--	--	--
Estimated Staffing Needed per Shift	3	3	2	2	1	1	1 REMOTELY	1	1	1	1	1	--	--	--

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Maximum Trucks Processed for Weighments Per Hour

- The number of trucks per lane that can be weighed using portable or static scales and enforcement actions taken if necessary.
- Fixed scale facilities can increase capacity significantly.
- VWIM or e-Screening systems can increase effective capacity by keeping compliant trucks out of the facility.

Trucks Processed for Inspections Per Hour

- The number of trucks that can be inspected at the CVSA levels.
- The capacity will vary depending on the level of the inspection and inspection environment.

Pull-in Rate During 8-Hour Shift

- The number of trucks that can be processed by each 8-hour shift.

Estimated Staffing Needs Per Shift

- The typical number of officers needed at the facility to handle truck processing.
- Staffing may be decreased during low truck hours, likely based on prior experience.

Pull-in Rate During 8-Hour Shift

- The number of trucks that can be processed by each 8-hour shift.

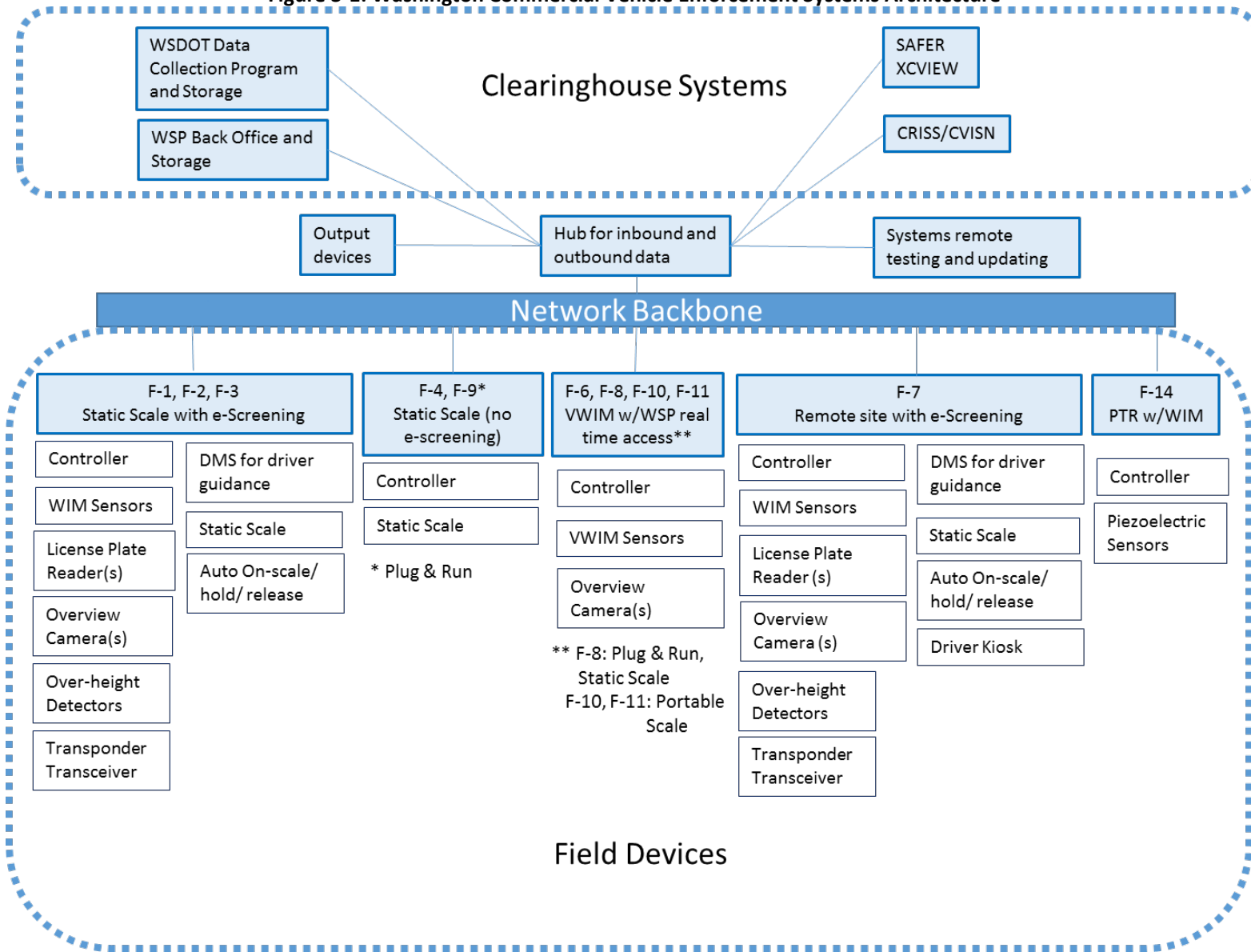
Information Management (IM) Systems

Many of the technological solutions applied to enforcement programs today require IM Systems functionality for components to communicate with one another at enforcement facilities, to communicate with state systems, to communicate with database information query systems, and for headquarters to communicate with equipment for remote operations and maintenance. **Figure 3-1** presents the conceptual layout of how these systems should be interconnected. At the top, clearinghouse systems provide data storage, analysis, and two-way communications with the field based systems. These usually connect through a hub which communicates with the field equipment through the network backbone. In the field, most of the facility types have several pieces of equipment that are necessary for that type of facility to function correctly and efficiently, as well as provide master communications from the site back to the clearinghouses.

The clearinghouse systems as shown are representative in that each of them has several sub-systems. The WSDOT data collection program and storage associated with it are a key function of the permanent traffic recorder programs, and the WSDOT data are to be shared with WSP to assist in enforcement. The 11 e-Screening sites plus two existing VWIM sites should provide information for enforcement, and future VWIM sites will likewise be used this way. Similarly, WSP currently collects information from all other facilities for reporting and storage. As shown in the upper right of the figure, interfaces to other clearinghouse systems are included.

Currently, WSDOT has its own implementation of CVISN, the Commercial Vehicle Roadside Information Sorting System (CRISS), for communications to the field facilities. WSDOT is considering other ways to facilitate this function including testing the iROC system from International Road Dynamics Inc. (IRD). State, regional, and national databases can provide specific truck information and also can be updated by enforcement activities in Washington State.

Figure 3-1: Washington Commercial Vehicle Enforcement Systems Architecture



These databases and access systems currently include XCVIEW (WSDOT software) and SAFER. Over time, some of the component packages may be updated or replaced with newer technology and programs with additional functionality and higher speed access.

Decision Tool

Overview

Table 3-4 is a decision tool intended for use in the selection of a facility type for specific site conditions. The 15 facility types are listed across the top, while specific site concerns are listed in the rows. An “X” in table cells indicates that the corresponding facility type may be used to address the specific associated concern. A specific site may have more than one concern or issue to be addressed. Following are descriptions of the various specific concerns.

Infrastructure Protection

- Under-designed Pavement
 - Road sections where overweight truck loads can cause significant damage due to substandard design for the Washington legal maximum of 105,500 lb. trucks, such as older state roadways and bypass routes.
 - Road sections that provide access to road sections where overweight truck loads can cause significant damage due to section built design (substandard) such as local city streets which provide last mile access to truck destinations.
- Pavement Surface Life
 - Roadways where high overweight truck volumes over time can significantly reduce pavement life such as roadway sections built to lower truck volume standards or roadways in need of capital repair but prioritized below funded projects.
- Bridge Structure
 - Bridges that are load limited below state standards.
 - Bridges where overweight trucks can significantly reduce service life. Examples include bridges built to carry lower truck volumes and bridges in need of improvement but not yet programmed.
- Bridge or Tunnel Height
 - Bridges or tunnels with lower than standard clearance.
 - Bridges or tunnels that if damaged could disrupt major travel movements and economic efficiency.
 - Bridges or tunnels near locations where over-height trucks have a tendency to occur, for example, on transport routes near major construction sites.

Safety

- Truck Condition

- Trucks with unsafe conditions such as poor or malfunctioning brakes or suspensions, incorrect coupling, worn tires, malfunctioning lights, malfunctioning signals.
- Unbalanced Loads
 - Trucks with unbalanced side-to-side loads but still meet regular weight limits and axle loading can result in turn-overs on sharp turns.
- Unsecured Loads
 - Trucks with unsecured loads can result in debris on pavement possibly causing crashes or environmental damage, or may lose an entire intermodal container unit.
- Operator Condition
 - Operator license expired or improper license or no license.
 - Skill Performance Evaluation Certificate missing.
 - Operator working over time limit.
 - Operator medical certificate expired or missing.
 - Improper seat belt use.
 - Vehicle inspection reports.
 - Hazmat/Dangerous goods documentation.
 - Operator impaired.

Location

- Drayage Load
 - Incorrect information on container weight and/or contents.
 - Incorrect information on gross vehicle weight.
 - Improper chassis or tractor for container.
 - Exceed allowable dimensions.
 - Great concentration, e.g., near port facilities and collector/distributor warehouses.
- High Truck Volume
 - Over 1,200 one-way mainline trucks per day.
 - Good location for high capacity fixed facility – covers many trucks.
- Moderate Truck Volume

- 100 to 1,200 one-way mainline trucks/day.
- Good location for medium capacity fixed facility – covers some trucks.
- Low Truck Volume
 - Below 100 one-way mainline trucks/day.
 - Good location for lower capacity VWIM with or without pull off site and Plug & Run with portable or fixed scale.
- Overweight Trucks
 - Known overweight truck locations such as near resource extraction.
- Bypassing Enforcement Facility
 - Location for checking trucks avoiding mainline or fixed facility.
- Roadway Consolidation Point
 - Location that concentrates truck traffic such as river bridges, mountain passes, roadway junctions (“choke” point).
 - Efficiently covers several routes leading from the consolidation point.
- Remote Location
 - Locations that are hard to staff due to remoteness or hard to access due to weather conditions.
 - May also be employed overnight at daytime staffed locations where nighttime truck volumes will not justify staffing.
- Climatic Conditions
 - Extremely hot, cold, snowy, or icy locations where personnel are less effective conducting weighments and inspections without shelter.

Other

- Information Needs Only
 - Locations where WSDOT or WSP want to collect truck volume and possibly truck weight to assist in planning enforcement facilities and activities.
 - Location where WSDOT wants to collect volume, weights, and class for planning efforts, such as pavement wear systems and future capacity increases.
- Regulatory Requirements
 - Locations where WSDOT or WSP want to collect truck volume and possible truck weight to fulfill information needs for regular required federal or state reporting.

Table 3-4: Facility Type Decision Tool

FACILITY TYPE ⁽¹⁾	FIXED - ASSIGNED STAFF				MOBILE		FIXED - UNASSIGNED STAFF (10)						DATA COLLECTION		
	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS (10)	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION (10)	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION (10)	MOBILE ENFORCEMENT (NO INFRA-STRUCTURE)	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	e-SCREENING; REMOTE SITE WITH FIXED SCALE; AUTO-WEIGHMENT & KIOSK	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE WITH STORED SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM	TEMPORARY TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM
	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	F-12	F-13	F-14	F-15
SPECIFIC CONCERN															
1-INFRASTRUCTURE PROTECTION															
1.1 UNDERDESIGNED PAVEMENT (2)	X	X	X	X	X	X	X	X	X	X	X	X		X	X
1.2 PAVEMENT SERVICE LIFE (3)	X	X	X			X	X	X		X	X			X	X
1.3 BRIDGE STRUCTURE (4)	X	X	X			X	X	X		X	X			X	X
1.4 BRIDGE OR TUNNEL HEIGHT	X	X	X			X (11)	X	X (11)		X (11)	X (11)				
2-SAFETY															
2.1 TRUCK CONDITION	X	X	X	X	X	X		X	X	X	X	X			
2.2 UNBALANCED LOAD	X	X	X	X	X	X	X	X	X	X	X	X			
2.3 UNSECURED LOAD	X	X	X	X	X	X		X	X	X	X	X			
2.4 OPERATOR CONDITION	X	X	X	X	X	X	X	X	X	X	X	X			
3-LOCATION															
3.1 DRAYAGE LOAD	X	X	X	X	X	X	X	X	X	X	X				X
3.2 HIGH TRUCK VOLUME: OVER 1200 ONE WAY MAINLINE TRUCKS/DAY	X	X	X	X											X
3.3 MODERATE TRUCK VOLUME: 100 TO 1200 ONE WAY MAINLINE TRUCKS/DAY				X			X	X	X						X
3.4 LOW TRUCK VOLUME: BELOW 100 ONE WAY MAINLINE TRUCKS/DAY					X	X				X	X	X			X
3.5 OVERWEIGHT TRUCKS	X	X	X	X	X	X	X	X	X	X	X	X		X	X
3.6 BYPASSING ENFORCEMENT FACILITY					X	X	X	X	X	X	X	X			X
3.7 ROADWAY CONSOLIDATION POINT (5)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.8 REMOTE LOCATION (6)						X	X							X	X
3.9 CLIMATIC CONDITIONS	X	X					X								
4-OTHER															
4.1 INFORMATION NEEDS ONLY						X							X	X	X
4.2 REGULATORY REQUIREMENTS (7)	X	X	X			X	X	X	X	X	X		X	X	
4.3 TRUCK REST PARKING DEMAND (8)	X	X	X												

(1) See Table 3-1 for definition of Facility Types.
(2) Pavement not in compliance with Washington allowed truck weights
(3) Considering pavement degradation over time.
(4) Weight limited structure

(5) River crossings, mountain passes, etc.
(6) e.g., Remote rural location not easily staffed
(7) e.g., Security, Permitted Overweight/Over-height trucks

(8) Parking for enforcement activities is included in general site layout; this is additional parking for operator rest.
(9) Officer needs to find a suitable location.
(10) Staffing typically intermittent
(11) Applies if over-height detection provided and warning message at a minimum provided to truck driver.

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- Truck Rest Parking Demand
 - Locations where truck rest parking demand is strong or is forecasted to be strong, particularly as driver log enforcement technology closes gaps; truck parking needs for enforcement operations considered separately in facility layout needs.

Decision Tool Use

To use the table, a user would identify which specific concerns are present at a site, then match up those concerns with the facility type or types that best address the concerns. This should result in an initial screening of facilities that might work best at the site.

When selecting a facility in a plan, it is important to next consider the need for the facility as well as the information and descriptions provided in **Tables 3-1 through 3-3**, since site specifics may indicate a different facility is a better solution. For instance, truck overweight proportions and volumes may indicate a need for static scales at two locations that are relatively close to each other. However, there may be a roadway point upstream where the two streams of trucks could be reviewed with a single facility that is augmented by VWIMs on minor bypass roadways. This selection might result in lower cost both for initial capital outlay and for ongoing staffing.

Other factors that may come into play are site topography, right-of-way availability, and roadway geometrics. Such factors should be addressed when addressing statewide needs when alternatives are under consideration. Final determination of facility type in some cases might not be made until further conceptual or preliminary design is undertaken. It should also be noted that the table can be used to evaluate whether existing facilities are appropriate, or whether a facility should be upgraded or downgraded.

Example Application

An example of use of the table matrix would be a secondary roadway that can serve as a bypass of a major fixed facility, such as a Port of Entry (POE). At first, there may be anecdotal evidence from WSP that some trucks may be using this secondary roadway to bypass. WSP roaming officers have occasionally run enforcement efforts on this roadway and have found several trucks overweight. Officers also note that the number of trucks that would have inspection violations is relatively high. However, given the high labor expense, it is difficult for WSP to provide good coverage and encourage change.

Using **Table 3-4**, this situation falls under “3.6 Bypassing Enforcement Facility.” WSP asks WSDOT to install a temporary traffic recorder with WIM capabilities (F-15). After two months, WSDOT summarizes the data and notes that 10 percent of the trucks passing the facility are likely overweight – a relatively high proportion – but the volume of trucks is under 300 on an average day. Together, WSP and WSDOT decide that this location is important since it is a POE bypass and the agencies want to review trucks coming into the state consistently. Consequently, they decide the location needs permanent monitoring and occasional enforcement. The agencies decide to implement a VWIM plus pull off site for portable scale weighment or inspection (F-11). The VWIM system allows the agencies to monitor weight compliance over time. The VWIM real-time access allows WSP mobile officers to target specific trucks for portable scale weighment making WSP labor more efficient. However, given the proximity of the POE, it is decided that trucks needing inspection should be escorted to the POE for further review.

Upon implementation, VWIM data reviews show key periods when bypassing trucks are overweight. WSP then focuses enforcement during these times for several months. After the

concentrated enforcement, the VWIM data show much better compliance with overweight truck proportions, dropping to 2 percent. WSP continues to monitor the VWIM data over time for increases in non-compliance and occasionally uses the real-time VWIM data for spot enforcement. The Patrol also uses the VWIM data to identify repeat overweight by-passing trucks and reports these trucks to their companies through carrier review letters or in-person visits.

Sample Scenarios

This section presents four scenario examples of operations including responsibilities for ensuring comprehensive enforcement.

Virtual Weigh-In-Motion Without Pull-Off

WSDOT and WSP have upgraded an existing permanent traffic count location (F-13) to a VWIM without pull off (F-6). A WSP officer locates his cruiser downstream from the VWIM in a suitable location for engaging trucks for which the VWIM system indicates additional weight enforcement is necessary. After logging into the secure state-wide VWIM network, the officer brings up the VWIM located upstream of his position. A dashboard display provides total trucks for the past month, week, and day to current time along with the estimated proportion overweight for each period. An overweight truck passes through the VWIM location. The VWIM measures the truck weight at approximately 15 percent over allowable limits. The VWIM's Automatic License Plate Reader identifies the truck and the overview camera takes a picture of the truck. The VWIM dashboard viewed by the officer shows the picture of the truck in question, license plate number as read by the system, number of axles on the truck, and suspected overweight amount in red. The officer immediately scans for the truck approaching his position. As it arrives, he intercepts the truck and signals the driver to follow him.

The officer escorts the truck to a large parking lot which is empty enough for portable scale weighment and inspection. Once they have reached the location, the officer clicks on the truck record that brings up a screen displaying additional data on the truck and driver. As it turns out, the truck was weighed and identified four hours earlier as being marginally overweight at a POE by the e-Screening system. In the intervening time, the driver stopped to pick up additional load and now his truck is very overweight. Furthermore, the driver has since timed-out based on the electronic log book system. The officer deploys the portable scale system, weighs the truck, measures the truck, and conducts a Level III inspection. The officer issues citations for overweight, over hours, and two pieces of missing documentation. He then decides to put the truck and operator out of service and escorts the truck to a local truck stop where the driver can rest and contact his company about off-loading the truck to make it legal weight.

Remote Site with e-Screening, Fixed Multiplatform Scale with Auto-Weighment & Kiosk – Unstaffed

WSP and WSDOT have implemented a remote facility (F-7) in the northeast corner of the state along US 395 north of Kettle Falls. Recent information from the e-Screening system indicates surges of possible overweight trucks passing the facility on Mondays and Thursdays from 10 PM to 3 AM. Given the long travel distance to the facility and limited labor resources, it is only possible to staff the facility during a few daylight hours once a month. Traffic is relatively light around 11 PM at the Spokane POE and an officer logs into the remote operations terminal for the Kettle Falls locations. The remote site begins to screen trucks using the e-Screening technology and directs a truck into the facility. The driver proceeds into the facility and stops on the multiplatform scale when the display indicators direct him. A Dynamic Message Sign (DMS) indicates the driver is to

stay in the cab and await further instructions. The system checks the truck weight against the e-Screening system and determines the truck is on the scale appropriately and indicates this to the remote officer. The system performs the weighments while the database linkage system uses the AVI information to pull up any details on the truck. As it turns out, the weight for the truck is just under the limits. The weight information is displayed to the remote officer and the truck driver via DMS. The system reads the electronic log book information and determines the driver has several hours of service time left. The remote officer tells the system to change the DMS to indicate the truck is acceptable and a green light is presented to the driver.

Later that night, the truck approaches an open fixed scale facility with e-Screening. The system uses the AVI information to determine the truck was recently weighed and that the operator has two hours of service left. The system indicates the driver should continue on the mainline, passing the facility.

Virtual Weigh-in-Motion Plus Pull-Off Site with Stored Portable Scales

A WSDOT study showed that SR 410 at the Buckley scale location continued to have a significant amount of truck traffic. However, the facility was outdated and deemed difficult to repair. To make the location effective, it has been converted to a VWIM with stored portable scales (F-10). Recent VWIM information has indicated trucks were concentrated around the 5 AM to 8 AM weekday timeframe and the proportion of overweight trucks during that time period is much higher than statewide averages. A WSP officer heads to the facility at 4:30 AM and deploys the scales from the on-site cabinet at this location. The scale system is linked into the officer's computer. She then logs into the VWIM system and activates the location to pull in trucks that are suspected of being overweight. The VWIM detects a likely overweight truck the officer directs the truck to the station. The portable system is used to weigh the truck. During the weighment, the officer realizes the truck appears to have several safety issues and decides a Level II inspection is indicated. When the inspection is complete and the truck is released, the officer uses the VWIM system to bring in additional trucks for enforcement review.

Port Of Entry: Staffed 24/7 Fixed Multiplatform Scale With Auto-Weighments, Scale House & Inspection Building With Pit and e-Screening

The Port of Entry facility at Bow Hill (F-15) is along the major I-5 trucking route. The facility is in operation and both scales are available for weighing. The e-Screening system is functioning bringing in trucks for weighments and review. The auto-hold / auto-release system has been deployed at both scales. Truck traffic is heavy this evening. Both scales are clear. A truck is automatically directed to Scale 1 for weighment because the e-Screening system detects a potential for overweight. The system proceeds with checking to make sure the truck is on the scale pad and proceeds with the weighment. At the same time, a truck is directed to Scale 2 that was randomly selected for review. The system makes sure the second truck is on the scale correctly and performs the weighment finding weight is not a problem. However, the system also signals the scale house officer that a random manual review is recommended and holds the truck. The officer visually reviews the truck and notices that several lights are burned out. He instructs the driver to proceed to the inspection building for a Level I inspection and lets the inspecting officer know why the truck is headed to the building. In the meantime, the truck on Scale 1 is found to be legal weight and is released, and another truck is directed to Scale 1 for routine weighing.

Technology Effects on Operations, Maintenance, and Staffing

The advancement of technology in recent years and expected in the coming decades will enable WSDOT and WSP to be more efficient in their operations. First, by strategically locating static scales, overall capital and maintenance outlays can be reduced. Second, by using officers' time more efficiently by bringing only probable overweight trucks to a fixed facility and automating some processes, officers can use their training and expertise for more complicated situations. Additional benefits include databases of 24/7 information that can be used for planning focused enforcement in problem areas, building statutory information on specific problematic trucks, truck drivers, and trucking companies, and providing information for input to long term bridge and pavement wear programs. These data systems, when acting in real time, can provide pre-clearance, prior weighment, electronic driver logs, and other data to reduce enforcement facility wait times.

The systems require maintenance, repair and replacement, data network and storage systems, data processing and interpretation, and advanced technology skills capacity for both agencies. There are expenses involved in acquiring, deploying, and operating these systems that did not exist in the past. CVES planning must include these costs which will somewhat offset savings on both fixed facility capital and operations costs. The agencies need to recruit staff capable of understanding the advanced systems and with the ability to design and procure them, operate them, and provide maintenance where needed. These technological advances will also provide new opportunities for existing staff who have experience with or interests in advanced technology. At the same time, there should be labor savings through automation of processes previously completed by staff personnel.

Future Technology

The current state of technology has assisted the CVES program by providing better data, better screening, and automating some functions. Future technologies may change the way commercial vehicle enforcement is conducted. Similar to advancement in today's technology, improvements will occur over several years. Capital facilities are expensive to replace, new technology needs to be proven prior to deployment, agency organizational and skills capacity needs to be built, and technology needs to disseminate through the trucking fleet. Some technologies forthcoming include:

- **Connected Vehicles** – Connected vehicle technology will allow trucks, roadway infrastructure, and back-office systems (both agency and trucking company) to share greater amounts of data. Current NORPASS and Drivewyze systems allow e-Screening technology to communicate directly with drivers to allow facility bypass. In the future, add-on systems like these will likely not be needed, but rather built directly into trucks. These systems will then be able to communicate additional information such as truck systems status and issues, prior weighments, cargo manifests, destination, driver eligibility, and driver hours' status. The overall result will be to reduce the amount of manual enforcement actions while increasing compliance through communications.
- **Automated Vehicles** – Automated vehicle technology will continue to advance in small stages. In the context of trucking, current technology allows for smart cruise control, automated braking, automated traction control, automated lane keeping, and back-up guidance. At some point, truck platooning technology will allow drivers to rest while a lead driver operates the first truck and the others follow using the connected and automated

vehicle technology to maintain safe operation. It is estimated platooning technology may also reduce fuel consumption through better aerodynamics. Eventually, a single driver may be able to operate a fleet of trucks, greatly reducing labor expense.

It must be noted that the turnover of the commercial truck fleet is relatively slow. In practical terms, this means that while the onset of connected and automated vehicles needs to be anticipated and figured in CVES planning, change will not be rapid. Many of the features of existing enforcement systems will need to stay in place over the next 10 to 15 years.

Other Considerations

- Heavy Haul Routes – The truck routes that permitted overweight trucks either can use or are required to use. WSDOT permits office has identified roadways with weight limited bridges and other vulnerable items that would be at risk due to overweight truck traffic. Today, drivers or their companies map out the route of their permitted overweight or over-height vehicles. In the future, the permitting system should become more automated whereby WSDOT Commercial Vehicle Services should assist applicants with mapping routes to minimize potential adverse impacts on the road network.
- Permit System Upgrade - Another development that will assist with commercial vehicle enforcement will be the addition of truck identifier information to the permitting system instead of the limited truck company information required in permits today. An upgraded permit system should at the same time be integrated with the WSDOT's CVISN implementation so that properly permitted trucks could bypass weight and inspection facilities, lightening the facility loads.
- Agency/Facility Joint Use – In planning future facilities, WSDOT and WSP should consider working with other state agencies for potential joint use of facilities to reduce procurement, development and operations costs. Candidate cooperative offices and agencies include Commercial Vehicle Services permitting, the Department of Motor Vehicles, Department of Fish and Wildlife, and possibly public-private entities.

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CHAPTER 4: Criticality Analysis

Overview

Criticality is the overall importance of a roadway and the commercial vehicle enforcement facilities protecting that roadway within the context of commercial vehicle enforcement across the State of Washington. It is determined as a function of several factors related to the characteristics of the roadway. Criticality is a basic input to the prioritization of projects for both the preservation and improvement of CVES facilities.

Criticality Ratings

Criticality assesses the ability of the particular infrastructure/roadway to impact the attainment of the Commercial Vehicle Enforcement Systems mission, which is to:

- Ensure Safe Operations of Commercial Vehicles.
- Preserve the State's Highway Infrastructure.
- Support Economic Vitality through Maintaining Freight Mobility.

The Criticality Rating is a numerical evaluation that rates a road segment on the likelihood of receiving high volume freight traffic and the segment's ability to provide safe and orderly movement of freight traffic. Criticality Ratings range from 1 to 5, with 5 being the most critical and 1 being the least critical. A high Criticality Rating implies that the segment is a prime candidate for CV enforcement and should receive precedence in project prioritization.

The first step in the rating process is to identify Criticality Factors. The following Criticality categories with associated Criticality Factors are used in the Criticality Analysis:

- Routing – whether or not the road segment is a major entry to the Washington State road system.
- Commercial Vehicle Volume – trucks and cargo on the segment considered several ways:
 - By volume.
 - By freight tonnage.
 - By whether or not the segment carries a high volume of container traffic.
 - By volume of trucks known to be overweight.
 - By percentage of trucks known to be overweight.
- Safety – number of commercial vehicle crashes per truck-mile of travel.

Other factors were considered but not included for various reasons. An example is bridge hit locations, since such hits were too few in number and too random to help determine criticality.

Next, Weighting Factors for each of the Criticality Factors were developed, followed by the Metrics for each factor and the associated Metric Score. These results are presented in **Table 4-1**.

Table 4-1: Criticality Categories / Factors, Weighting Factors, Metrics, and Metric Scores

Criticality Category	Criticality Factor	Weighting Factor	Metric	Metric Score
Routing	Entry to System (roads typically within 30 miles of entry)	10	Major Nautical Port, Interstate Highway	5
			Minor Nautical Port	3
			State Route/US Highway	2
			Other	1
Volume & Composition	Truck Volume (AADT)	10	10,000+ Trucks	5
			5,000 – 9,999 Trucks	4
			3,000 – 4,999 Trucks	3
			1,000 – 2,999 Trucks	2
			0 – 999 Trucks	1
	Freight Tonnage	10	T-1 Road (>10M T/yr)	5
			T-2 Road (4 – 10M T/yr)	3
			Other (>0, <4M T/yr)	1
	High Volume Container Traffic	7	Yes	5
			No	0
	Annual Average Weekday Overweight Truck Volume	7	500+	5
			300 – 499	4
			100 – 299	3
			50 – 99	2
			1 – 49	1
	Annual Average Weekday Overweight Truck Percentage	7	>10%	5
			5% – 10%	3
			<5%	1
Safety	Truck Crash Density	5	20+ Crashes/1,000 Truck-Mile	5
			10 – 20 Crashes/1,000 Truck-Mile	4
			5 – 10 Crashes/1,000 Truck-Mile	3
			1 – 5 Crashes/1,000 Truck-Mile	2
			>0, <1 Crashes/1,000 Truck-Mile	1

Criticality Scoring Equation

A Criticality Score for each state road segment was developed by multiplying the Weighting Factors by the Metric Score for the road segment. Road segments were defined based on segment geometry provided in Washington State's ArcGIS geodatabase. The Metric Score for each of the Criticality Factors shown in **Table 4-1** was developed by road segment. The Metric Scores were then multiplied by the Weighting Factors. The resultant scores for each of the Criticality Factors were then summed to determine the segment's overall raw Criticality Score. **Table 4-2** presents an example Criticality Score calculation.

Table 4-2: Example Raw Criticality Score Calculation

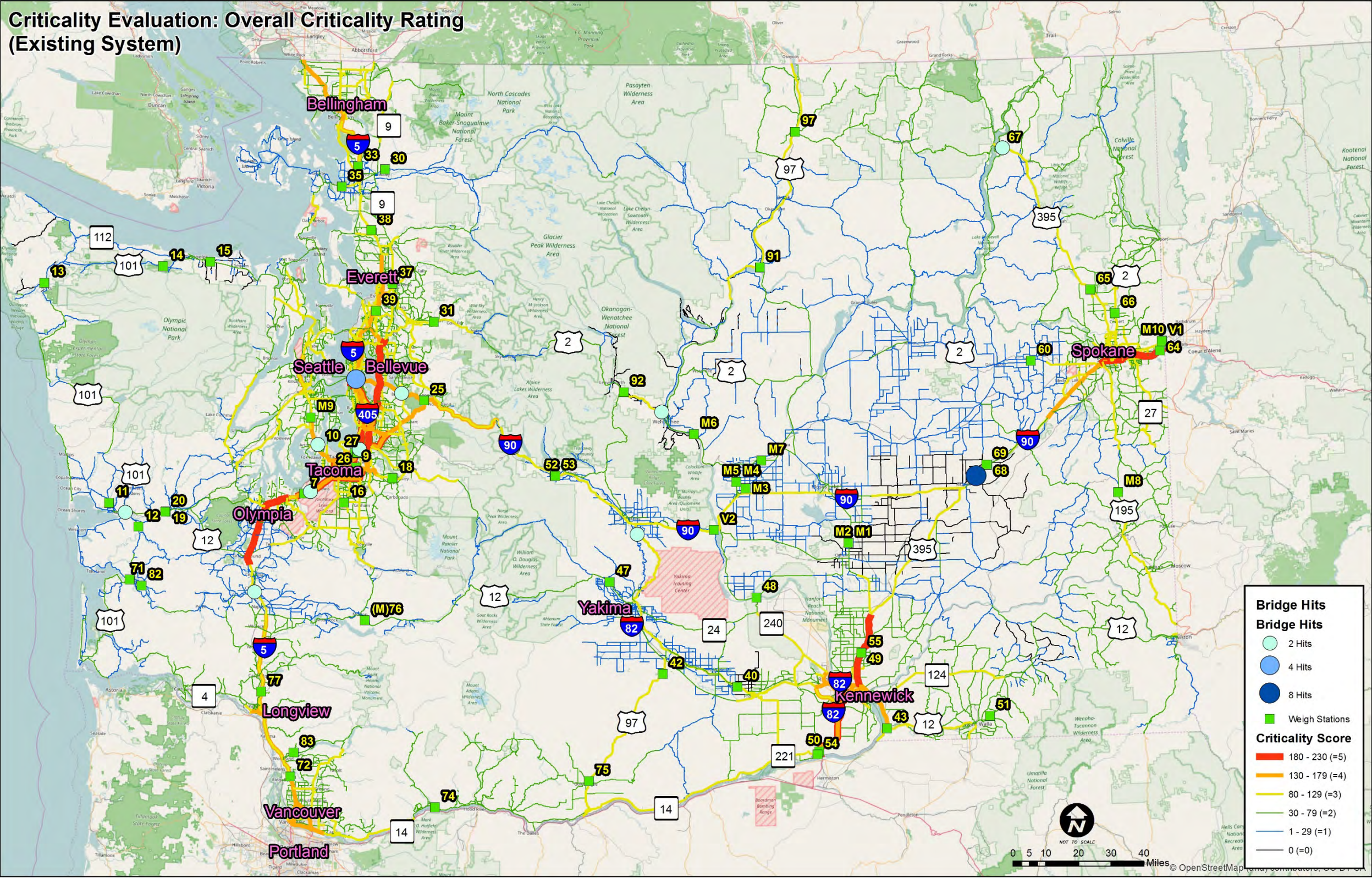
<p>Road X is:</p> <ul style="list-style-type: none"> ▪ Major port entry to the system (5 points with weighting of 10) ▪ Receives 6,000 trucks AADT (4 points with weighting of 10) ▪ Is a T-2 road (3 points with weighting of 10) ▪ Does not carry a high volume of container traffic ▪ Has an annual average weekday overweight truck volume of 76 (2 points with a weighting of 7) ▪ Has an annual average weekday overweight truck percentage of 9% (3 points with a weighting of 7) ▪ Has a truck crash density of 17 crashes per 1,000 truck-miles (4 points with a weighting of 5)
<p>TOTAL RAW SCORE: $(5 \times 10) + (4 \times 10) + (3 \times 10) + (0 \times 7) + (2 \times 7) + (3 \times 7) + (4 \times 5) = 175 \text{ points}$</p>

The raw Criticality Scores for each segment were divided into five ranges based on the distribution of scores among all scored road segments in the system. Each range was assigned a Criticality Rating of 1 to 5, with a value of 5 being most critical. In this way, each road segment on the entire state system was evaluated in terms of its importance to CV operations and the potential for needed enforcement. The resulting Criticality Ratings for each road segment were then recorded in an ArcGIS data table allowing a visual representation of the Criticality Ratings for state roadways. WSDOT and WSP assessed the reasonableness of the results in light of practical operating experience. The Criticality Factors, Weighting Factors, and Metrics were adjusted slightly until results reflected practical operating experience.

The Criticality Ratings for the statewide system are shown in **Figure 4-1**. Appendix D includes one set of maps that depicts the Metric Score for each of the Criticality Factors and another set that provides a more detailed view of the Criticality Ratings for the state roadways over the statewide system along with identified bypass routes. The second set provides more detail on the overall Criticality Ratings by geographic area.

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Figure 4-1: Statewide Criticality Scores and Bridge Hits



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CHAPTER 5: Needs Assessment for Commercial Vehicle Enforcement Systems Facilities

Overview

The Needs Assessment for Commercial Vehicle Enforcement Systems (CVES) Facilities considered the following factors:

- *Condition* of the existing Facility regarding the level of repair, rehabilitation, and/or replacement that is needed.
- *Functionality* of the existing Facility regarding the level of change that is needed for it to operate as its Desired Facility Type.
- *Need for additional* Facilities on road segments that warrant enforcement, but do not currently have enforcement Facilities.

The results of this assessment for each of these factors were combined to complete the Needs Assessment for Washington CVES Facilities. A description of the assessment for each factor follows.

Condition of Existing Facilities

Step 1 – Classify existing Facilities in terms of the Facility Types identified in the Concept of Operations (Chapter 3)

The existing Facilities identified by Washington State Department of Transportation (WSDOT) and Washington State Patrol (WSP) were originally categorized as either Fixed Facilities, Mobile Facilities, or Data Collection Sites. The Concept of Operations identified four categories of Facilities with each category broken down into Facility Types as shown in **Table 5-1**. The appropriate Facility Type was then identified for each of the existing Facilities.

Table 5-1: Facility Categories and Types

Facility Category – Fixed-Assigned Staff			
F-1	F-2	F-3	F-4
PORT OF ENTRY – STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING/PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING/PITS	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION

Facility Category – Mobile	
F-6	F-7
MOBILE ENFORCEMENT (NO INFRASTRUCTURE)	VWIM; NO PULL-OFF – ESCORT SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION

Facility Category – Fixed-Unassigned Staff					
F-7	F-8	F-9	F-10	F-11	F-12
e-SCREENING; REMOTE SITE WITH FIXED SCALE; AUTO-WEIGHMENT & KIOSK	PLUG & RUN – VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	PLUG & RUN – FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE WITH STORED SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION

Facility Category – Data Collection		
F-13	F-14	F-15
PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM	TEMPORARY TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM

Step 2 – Identify the repair, rehabilitation, and replacement needs for each of the existing Facilities

Site visits conducted as part of the Strategic Planning work and Facility-specific information based on first-hand operational knowledge provided by WSP provided the information used to establish the repair, rehabilitation, and replacement needs for each of the existing Facilities. This information was vetted over the course of several discussions with WSDOT and WSP. A spreadsheet (**Appendix B**) was used to gather the information about each Facility. That spreadsheet is provided separately in more detail in an electronic file.

Step 3 – Rate the condition of each existing Facility to establish its ability to operate as its current type

The condition of a Facility is a measure of the Facility's ability to operate as currently intended. Each of the existing Facilities was given a Condition Rating based on its need for repairs,

rehabilitation, and/or replacement of equipment and infrastructure. The ratings shown in **Table 5-2** were used to establish a Facility's condition regarding its ability to operate as intended. In general, a facility was rated as "Fair" if repairs, rehab and/or replacement would cost less than \$100,000 and "Poor" if it would cost \$100,000 or more.

Table 5-2: Condition Rating System – Ability of Existing Facility to Operate as Currently Intended

Rating	Condition	Description
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality of Existing Facilities

Step 4 – Determine the Desired Facility Type for each of the existing Facilities

In 2016, the Motor Carrier Safety Division of WSP prepared the "2016 Commercial Vehicle Enforcement – Prioritization of Inspection Station Needs" document (see **Appendix E**). This document identifies desired Facility Types for most of the existing Facilities. The Facility Type Decision Tool (see **Table 3-4**) was also used to identify the appropriate Facility Type based on the concerns that are to be addressed. The results that were obtained from the WSP's document and the Tool were then finalized via several discussions with WSDOT and WSP and the Desired Facility Type (F-1 through F-12 as indicated in **Table 5-4**) was established for each existing Facility.

Step 5 – Identify the changes and improvements needed to convert the existing Facility to the Desired Facility Type

Table 3-1 and **Table 3-2** describe each Facility Type and the equipment and buildings that are included at each Facility Type. The changes that are needed to convert each existing Facility to its Desired Facility Type were established by comparing existing conditions to the requirements for the Desired Facility Type found in **Table 3-1**. Changes include both increasing and decreasing the level of sophistication of a Facility. Improvements to a Facility include upgrades in equipment, site condition, and/or building function. Improvements may be required without an actual change in Facility Type. Relocating a Facility is also considered an improvement.

Step 6 – Rate the functionality of each existing Facility to establish its ability to function as its Desired Facility Type

The functionality of a Facility is a measure of the Facility's ability to operate as the Desired Facility Type. Each of the existing Facilities was given one of the functionality ratings included in **Table 5-3** on its ability to operate as its Desired Facility Type. A cost of \$100,000 was again used as the cut-off between minor and major improvements.

Table 5-3: Functionality Rating System – Ability of Existing Facility to Operate as Desired Facility Type

Rating	Functionality	Description
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, minor R ³ or improvements are needed
3	Functional	Functional, major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not Functional	Not functional, major R ³ or improvements are needed

R³ = Repair, Rehabilitation, or Replacement

Need for Additional Facilities

Step 7 – Conduct a gap analysis to identify the additional Facilities that are needed on road segments that currently do not have enforcement capabilities

A gap analysis was conducted to identify segments of the state roadway system that warrant enforcement action, but currently have no enforcement Facility. The gap analysis considered two factors: the Criticality Rating of a road segment, and the use of a road segment as a “bypass” of existing Facilities.

Road segments with Criticality Ratings of 3 or higher (see Chapter 4) were assessed to determine if WSP is afforded the ability to enforce these segments with existing Facilities. Additional Facilities were identified where gaps exist and the Facility Type was established using the Facility Type Decision Tool (see **Table 3-4**).

Based on operational knowledge, WSP identified known bypass routes that are commonly used by truck drivers to avoid enforcement Facilities. The identified bypass routes that have a Criticality Rating of 3 or higher on the road segment associated with the bypassed facility were deemed to need an enforcement Facility. An F-6 (VWIM) Facility was added to offer enforcement capability on these bypass routes.

The Functionality Rating for all additional Facilities is 5. This rating was assigned because these Facilities currently do not exist and therefore are “not functional.”

Summary

The Needs Assessment for CVES Facilities considers: 1) the need for repair, rehabilitation, and/or replacement at existing Facilities; 2) the need for change or improvement of existing Facilities so that they function more effectively or in a different capacity; and, 3) the need for additional Facilities to enable effective enforcement on or near critical roadways. The results of the Needs Assessment are presented in **Table 5-4**. The Facilities are listed generally from east to west across the state. See **Appendix D**, Map I (Map Directory) for the specific geographic areas.

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, but minor R ³ or improvements are needed
3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
9	4	64	Spokane (POE)	I-90	299	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Repair height detector and flag pole. Replace hazmat signage, inspection bay signage, and work desk in inspection bay.	2	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Expect minor tech upgrades when they are available - new cameras, next generation of CVISN, add DOT number reader	2
9	4	VWIM	Newman Lake VWIM	SR 290	18	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION		1	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Add ALPR.	3
9	4	66	Chattaroy	US 2	302	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Repair pavement along north and south side of scale pads.	2	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Conduct traffic count with F-15 Facility to confirm need for F-9 rather than just abandoning the Facility. Coordinate with Deer Park. Building to remain while viable.	2
9	4	65	Deer Park	US 395	182	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Coordinate with Chattaroy. Needs an F-15 volume check. Not a high priority but hard to put back in place if truck traffic picks up.	2
9	4	Mobile	Newman Lake WB	SR 290	Approx. 18	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Facility is currently closed/not used.	NA	Abandon		Not needed.	5
8	3	40	Grandview	I-82	76	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Repair concrete on border of north side pads.	2	F-2	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Inspection building desired, not absolutely necessary.	2

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, but minor R ³ or improvements are needed
3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
8		VWIM	SR 22 VWIM	SR 22		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass for Grandview	5
8	3	54	Plymouth (POE)	I-82	131	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHTMENT; <i>BUT NO INSPECTION BUILDING</i>	Repair/replace roof, HVAC systems, and electrical systems.	3	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHTMENT; INSPECTION BUILDING / PITS	Relocate facility and include inspection building, add e-Screening northbound and VWIM southbound on I-82 and VWIM westbound on SR 14. Additional parking needs to be considered for new facility. Existing facility will be abandoned when new facility is complete.	4
8		VWIM	Paterson VWIM	SR 221		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass for Plymouth POE. Current WSDOT PTR is too far north to be effective as a VWIM.	5
8	3	50	Plymouth	SR 14	80	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	Abandon		Abandon when new Plymouth POE Facility is complete. See comments for Facility #54.	5
8	3	49	Pasco (NB)	US 395	33	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert existing northbound PTR south of the facility to VWIM. Parking area improvements to be included.	3
8	3	55	Pasco (SB)	US 395	33	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Add scale for multi-axle weighment. Additional parking needs to be considered.	3
8		VWIM	Pasco Bypass VWIM 1	North Glade Road		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Pasco	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, but minor R ³ or improvements are needed
3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
8		VWIM	Pasco Bypass VWIM 2	Frontier Road		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Pasco	5
8	3	43	Wallula	US 730 / US 12	34	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Repair building.	2	F-7	e-SCREENING; REMOTE SITE WITH FIXED SCALE; AUTO-WEIGHMENT & KIOSK	Convert from F-4 to F-7. Coordinate with US 12 improvements.	4
3	6	VWIM	Vantage VWIM (I-90)	I-90	137	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION		1	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Add ALPR.	3
3	4	68	Tokio (EB)	I-90	231	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Remove building. Remove scales if and when pavement is replaced.	2
3	4	69	Tokio (WB)	I-90	231	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Facility is currently closed/not used..	NA	Abandon		Not needed.	5
3	3	48	Vernita	SR 24	43	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace approaches.	3	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Building to remain while it is viable.	2
3	6	94	Rock Island	SR 28	9	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
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Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
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3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
3	3	51	Walla Walla	US 12	342	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Building to remain while it is viable. Remove scales if and when pavement is replaced.	2
3	4	60	Rearden	US 2	282	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace approach and signage.	3	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		2
3	4	67	Kettle Falls	US 395	239	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION		1
3	6	97	Tonasket	US 97	315	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Replace scales.	3	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Building to remain while it is still viable.	3
3	6	91	Brewster	US 97 / SR 17	265	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace scale and signage.	3	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		3
3	4	Mobile	Othello East	SR 17	Approx. 33	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1
3	4	Mobile	Othello West	SR 17	Approx. 33	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1
3	6	Mobile	Quincy 1	SR 283	Approx. 2	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Facility is currently closed/not used..	NA	Abandon		Not needed.	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, but minor R ³ or improvements are needed
3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
3	6	Mobile	Quincy 2 - NB	SR 281	Approx. 5	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Future: Site appears to have scales. Consider removing if warranted.	1
3	6	Mobile	Quincy 2 - SB	SR 281	Approx. 5	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Replace pavement.	3	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Pull-off needs to be lengthened.	4
3	6	Mobile	Rock Island - Old	SR 28	Approx. 9	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1
3	6	Mobile	Winchester	SR 28	Approx. 38	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Site appears to have scales. Remove scales if and when pavement is replaced	1
3	4	Mobile	Thornton	US 195	Approx. 54	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Repair pavement.	2	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		2
3		VWIM	Ritzville VWIM 1	I-90		F-14	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM		NA	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	VWIMs desired on US 395 NB and I-90 EB before merge at current PTR locations. Pull-out would be on combined I-90/US 395, location TBD	5
3		VWIM	Ritzville VWIM 2	US 395		F-14	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM		NA	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	See Ritzville VWIM 1	5
--		VWIM	Spokane VWIM 1	US 195		F-14	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
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Functionality Rating Key		
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R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
--		VWIM	Spokane VWIM 2	SR 27		F-14	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
--		VWIM	Sprague VWIM	I-90 / US 395		F-13	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area westbound. Add VWIM.	5
--		VWIM	Uniontown VWIM	US 195		F-14	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
--		VWIM	Prescott VWIM	SR 124		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Coverage might be provided if PTR P05 on US12 is upgraded to F-6. Add VWIM.	5
--		VWIM	West Richland VWIM	SR 240		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Coverage might be provided sufficiently by Vernita fixed facility and/or upgrade of PTR S612 at Vernita. However, PTR is downstream from the existing facility. Add VWIM.	5
--		VWIM	Mary Hill East VWIM	SR 14		F-13	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
--		VWIM	Yakima VWIM	I-82		F-13	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
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R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
2	5	77	Kelso	I-5	44	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION		1	F-2	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Relocation required - No clear short term improvement - site not big enough for inspection bldg and so would need to relocate to make F-2 . The existing Facility would be abandoned if and when a new F-2 was built to replace it. No relationship to Kelso PTR 0.4 mi to the north.	3
2		VWIM	Castle Rock VWIM	SR 411		F-13	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass for Kelso facility. Upgrade PTR to VWIM on SB SR 411.	5
2		VWIM	Kelso Bypass VWIM	Pleasant Hill Rd		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Kelso Facility	5
2	6	53	Cle Elum (WB POE)	I-90	80	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Scale is settling. Rehab/replace scale/pavement.	3	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS		3
2		VWIM	Cle Elum Bypass VWIM	West Side Rd		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Cle Elum Facility. Add VWIM.	5
2	6	52	Cle Elum (EB)	I-90	80	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	Abandon		F-4 facility will be useful until North Bend EB completed, then Cle Elum EB would close.	5
2	5	76	Morton	US 12	100	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	This site has an existing building with restroom, but no fixed scale. Building was hit and is damaged. Remove building.	3	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Add VWIM.	3

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Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
2	3	47	Rim Rock/Naches	US 12	191	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Add VWIM.	3
2	6	92	Peshastin	US 2 / US 97	105	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert nearby PTR to VWIM. Building to remain while viable.	3
2	5	75	Goldendale	US 97	13	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1
2	3	42	Toppenish	US 97	56	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Building to remain while viable. Remove scales if and when pavement is replaced.	2
4	7	38	Stanwood/Bryant	I-5	212	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Clean and repair scale drainage system as it is full of dirt and plants indicating that it is not functioning as designed or regular maintenance is needed.	2	F-2	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Add inspection building.	3
4		VWIM	Stanwood/Bryant VWIM1	SR 9		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Stanwood/Bryant	5
4		VWIM	Stanwood/Bryant VWIM2	Pioneer Hwy		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Stanwood/Bryant	5
4		VWIM	Stanwood/Bryant VWIM3	Pacific Hwy		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Stanwood/Bryant	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

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R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
4	7	33	Bow Hill (POE)	I-5	235	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHTMENT; INSPECTION BUILDING BUT NO PITS	Install jersey barriers as a safety requirement. Re-stripe lanes and rehab/ replace parking area pavement.	3	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHTMENT; INSPECTION BUILDING / PITS	Add Inspection pits.	3
4		VWIM	Sedro Woolley VWIM	SR 9		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass for Bow Hill. Add VWIM.	5
4	7	35	Anacortes	SR 20	54	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Repair windows and requires general maintenance.	2	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Remove building. Add VWIM.	3
4	7	30	Sedro Woolley	SR 20	69	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Rehab/replace pavement and ancillary features (i.e., curbing).	3	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Add larger scale.	3
4		VWIM	Edison VWIM	SR 11		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
5	7	39	Everett (SB)	I-5	188	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHTMENT; OUTDOORS INSPECTION	Repair so that scale is fully operational and integrated with CVISN.	2	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHTMENT; OUTDOORS INSPECTION	Testing iROC here.	2
5		VWIM	Everett VWIM1	SR 527		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Everett. Add VWIM.	5
5		VWIM	Everett VWIM2	SR 99		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Everett. Add VWIM.	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
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Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
5	7	37	Lake Stevens	SR 9	17	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace outdoor lighting.	3	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Covert to Plug & Run. Building to remain while it is viable. Add VWIM.	3
5	7	31	Sultan	US 2	21	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace building and pavement.	3	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Upgrade to electronic signage.	3
5		VWIM	Monroe West VWIM	US 2		NA	DOES NOT CURRENTLY EXIST		NA	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Need a pull off location given the safety situation along this corridor.	5
5		VWIM	Woodinville VWIM	SR 522		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Consider upgrading PTR with WIM P19 which is a bit further west.	5
6	1	7	Ft. Lewis (NB)	I-5	117	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION		1	F-2	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Need to identify future plan for this Facility. Lane addition going on now plus proposed IC improvements. Short term, can upgrade to F-2 with \$5-6M bridge cost. Future move & combo w JBLM at logistics center possible. (700- 1,000 trucks/week go into JBLM).	3
6	2	27	Sea Tac (SB)	I-5	141	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Facility is currently closed and will not reopen.	NA	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Relocate in the future. Not high priority at this time.	5
6	2	26	Sea Tac (NB)	I-5	141	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Rehab/replace approaches to scales. Install gate to facilitate scale closure.	3	F-2	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Add Inspection building. Consider additional parking needs.	4
6	2	25	North Bend (WB)	I-90	25	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	Abandon		Not needed. Covered by Cle Elum WB. Remove building and scales.	5

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Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
6	1	10	Gig Harbor	SR 16	10	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Install a barrier between the Facility and the freeway to facilitate safety. Rehab building.	3	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Remove building.	2
6	1	9	Puyallup	SR 167 River Road	5	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace scale and pavement.	3	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Keep existing site for pull-off and install VWIM. Building to remain while it is viable. Remove scales if and when pavement is replaced.	3
6	1	18	Buckley	SR 410	19	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace scale pads, pavement and approaches. Repair overheight detector.	3	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Remove scales when replacing pavement/approaches.	2
6	1	16	Spanaway	SR 7	49	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Repair building roof, windows, and rest room. Repair overheight detector.	2	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Remove building. Remove scales if and when pavement is replaced.	2
6	2	21	Spring Valley	SR 99	7	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION.		1	F-9	PLUG & RUN - FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION		1
6	8	Mobile	Purdy	SR 16	Approx. 19	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Street view shows existing scale pads and scale head box. Remove scale components if and when pavement is replaced.	1
6		NA	North Bend (EB)	I-90		NA	DOES NOT CURRENTLY EXIST		NA	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Includes truck rest parking.	5
6		NA	Puyallup	SR 167 Future Limited Access Hwy		NA	DOES NOT CURRENTLY EXIST		NA	F-2	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Will need new F-2 Facility when new SR 167 limited access hwy built. Expected opening 2030.	5

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R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
6		VWIM	Parkland VWIM	SR 512		F-14	PERMANENT TRAFFIC RECORDER FOR CLASSIFICATION COUNTS; WIM		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area however finding a pull off spot is difficult. Also several bypasses exist. Add VWIM.	5
6		VWIM	Algona VWIM	SR 164		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
6		VWIM	McMillan VWIM	SR 162		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
6		VWIM	Yelm VWIM	SR 507		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Add VWIM.	5
7	5	72	Ridgefield (POE)	I-5	15	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Rehab/replace approaches, pavement, and scales.	3	F-1	PORT OF ENTRY - STAFFED 24/7; e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; INSPECTION BUILDING / PITS	Funds included in FY 15-17 biennium and construction expected in 2018. Replacing weigh station building and a second inspection pit.	4
7		VWIM	Ridgefield Bypass VWIM1	NW 31st Ave		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Ridgefield	5
7		VWIM	Ridgefield Bypass VWIM2	NW Timmen Rd		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Bypass of Ridgefield	5

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, but minor R ³ or improvements are needed
3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
7	5	74	Home Valley	SR 14	50	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Facility is currently closed/not used.	NA	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Add a VWIM. Rework site because too close to road. Remove scales and replace pavement. Remove building.	4
7	5	83	Woodland	SR 503	49	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Building to remain while viable. Remove scales if and when pavement is replaced.	2
7		VWIM	White Salmon / Washougal VWIM	SR 14		NA	DOES NOT CURRENTLY EXIST		NA	F-11	VWIM; PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. Provide pull off site given the narrowness and curves along this stretch.	5
1	8	82	Menlo	SR 6	3	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Building to remain while viable. Remove scales if and when pavement is replaced.	2
1	8	71	Raymond	US 101	57	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab site.	3	F-12	PULL-OFF SITE; PORTABLE SCALES FOR WEIGHMENT; OUTDOORS INSPECTION	Remove building and re-work site. Remove scales and replace pavement.	2
1	8	12	Artic	US 101	77	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	On bad corner, elevation drop, hard for trucks to get on scale sometimes. Consider relocation or site improvements to facilitate use.	3	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Building to remain while viable. Add VWIM and determine if site improvments/relocation is necessary.	4
1	8	11	Hoquiam	US 101	91	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Facility is currently closed/not used.	NA	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Building to remain while viable. Add VWIM.	3
1	8	13	Forks	US 101	191	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Building to remain while viable. Add VWIM.	3

Table 5-4: Commercial Vehicle Enforcement Systems Needs Assessment Results

Condition Rating Key		
1	Good	Facility does not need any immediate repair, rehab, or replacement
2	Fair	Facility requires some repair
3	Poor	Facility requires rehabilitation and/or replacement

Functionality Rating Key		
1	Functional	Fully functional, no R ³ or improvements are needed
2	Functional	Functional, but minor R ³ or improvements are needed
3	Functional	Functional, but major R ³ or improvements are needed
4	Semi-Functional	Semi-functional, major R ³ or improvements are needed
5	Not-Functional	Not-functional, major R ³ or improvements are needed

R³ - Repair, Rehabilitation, Replacement

Facility Information						Existing Facility Needs Assessment				Desired Facility Needs Assessment			
Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Type (from Table 3-1)	Description	Needs	Condition Rating for Existing Type of Facility	Type (from Table 3-4)	Description	Needs	Functionality Rating for Desired Type of Facility
1	8	14	Port Angeles (EB)	US 101	237	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace scale. Repair building. (Has vandalism issues, steel shutters corrode shut.)	3	F-8	PLUG & RUN - VWIM; FIXED SCALE AT PULL-OFF SITE; CABINET PLUG IN FOR WEIGHMENT; OUTDOORS INSPECTION	Convert to Plug & Run. Remove Building. Add VWIM.	3
1	8	15	Port Angeles (WB)	US 101	255	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION	Rehab/replace scale..	3	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		3
1	8	20	Brady (EB)	US 12	13	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Add e-Screening.	3
1	8	19	Brady (WB)	US 12	13	F-4	FIXED SCALE & SCALE HOUSE; OUTDOORS INSPECTION		1	F-3	e-SCREENING; FIXED SCALE & SCALE HOUSE WITH AUTO-WEIGHMENT; OUTDOORS INSPECTION	Add e-Screening.	3
1		VWIM	Poulsbo North VWIM	SR 3		NA	DOES NOT CURRENTLY EXIST		NA	F-6	VWIM; NO PULL OFF - ESCORT TO SOMEWHERE FOR PORTABLE SCALE WEIGHMENT; OUTDOORS INSPECTION	Criticality indicates possible need for facility in this area. It may be possible to use ATR R085 on the west end of the Hood Canal Bridge.	5

CHAPTER 6: Improvement Plan and Preservation Program Priorities, Costs, and Project Program

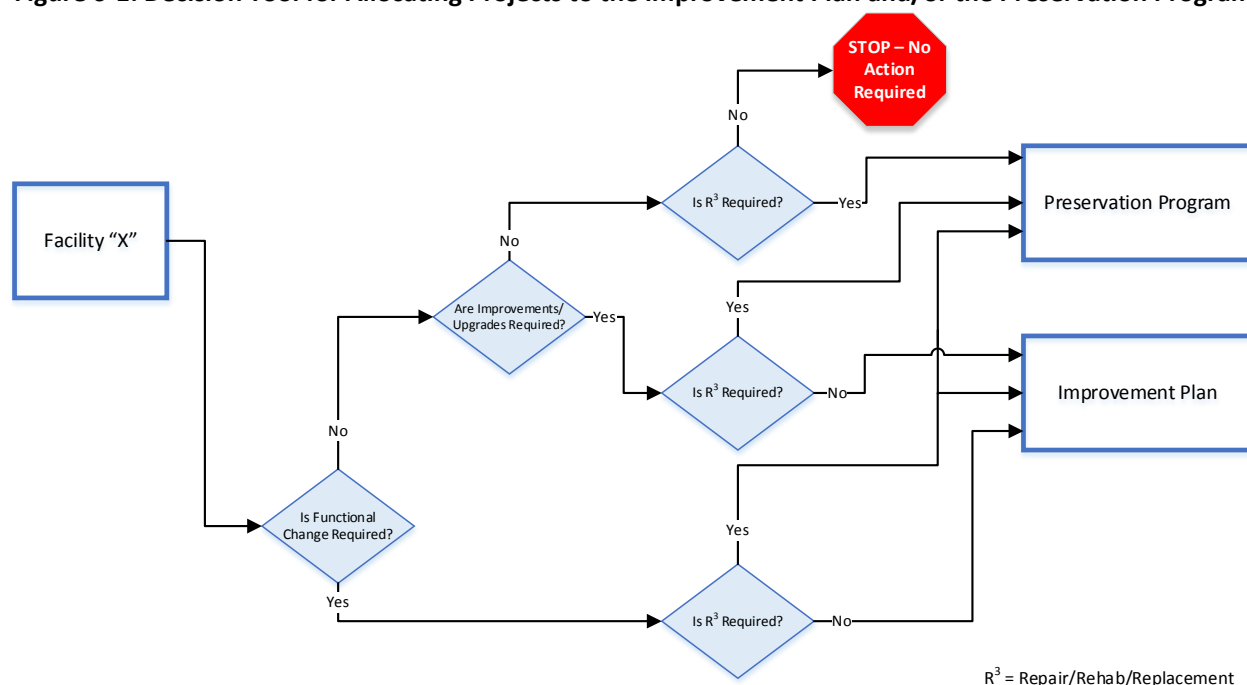
Overview

This Chapter covers: 1) the allocation of projects to the Improvement Plan (IP) and Preservation Program (PP); 2) the establishment of planning level costs for each project; 3) the prioritization of projects within the IP and PP; and, 4) the development of the IP and PP.

Allocating of Projects to the Improvement Plan and/or Preservation Program

The Needs Assessment summarized in **Table 5-4** identifies the work that is required to preserve, improve, and augment the Commercial Vehicle Enforcement Systems (CVES) Facilities so that the CVES mission is realized. The “work” that has been identified equates to “projects” which will need to be financed either by the PP funding or IP funding. In general, the PP is used for projects that repair, rehabilitate, or replace (R³) infrastructure. The IP is used for changes, improvements, or additions to infrastructure. With respect to CVES Facilities, the PP will fund the projects required to maintain facilities at their current Facility Type. The IP will fund projects required for upgrades, improvements, changes to Facility Type, and new Facilities. **Figure 6-1** presents the decision process that was used to allocate the work identified in the Needs Assessment for each Facility to the PP and/or the IP. Note that some facilities have projects in both the PP and IP.

Figure 6-1: Decision Tool for Allocating Projects to the Improvement Plan and/or the Preservation Program



Prioritizing Projects

Each Facility (existing and proposed) has been assigned a Criticality Rating based on the criticality of the road segment(s) that it serves. The projects identified at a particular Facility have been assigned the same Criticality Rating as the Facility. Criticality ratings range from 1 to 5, with 5 being the most critical.

IP projects have been assigned a Functionality Rating from 1 to 5, with a rating of 1 meaning that the Facility is fully functional and needs no R³. A rating of 5 means that the Facility is not functional.

PP projects have been assigned a Condition Rating of 1 to 3, with a rating of 1 meaning the Facility is in Good condition, 2 meaning the Facility is in Fair condition, and 3 meaning the Facility is in Poor condition.

The combination of the Criticality Rating with the Functionality Rating (for IP projects) or with the Condition Rating (for PP projects) was used to prioritize projects. The ratings can be illustrated with matrices, as shown in **Figure 6-2** and **Figure 6-3**.

Figure 6-2: Improvement Plan Projects Prioritization Rating Matrix

		Criticality Score				
		5	4	3	2	1
Functionality Score	5	VWIM - Woodinville VWIM - Paterson VWIM - Pasco Bypass 1 VWIM - Pasco Bypass 2 VWIM - Parkland 27 - Sea Tac (SB)	VWIM - Ridgefield Bypass 1 VWIM - Ridgefield Bypass 2 VWIM - Sedro Woolley VWIM - Sprague VWIM - Castle Rock VWIM - Kelso Bypass VWIM - Edison VWIM - Everett 1 VWIM - Everett 2 25 - North Bend (WB) n/a - North Bend (EB) n/a - Puyallup	VWIM - White Salmon/Washougal VWIM - Poulsoebo North VWIM - Cle Elum Bypass VWIM - SR 22 VWIM - Stanwood/Bryant 1 VWIM - Stanwood/Bryant 2 VWIM - Stanwood/Bryant 3 VWIM - Monroe West VWIM - Algona VWIM - McMillan VWIM - Yelm VWIM - Spokane 1 VWIM - Spokane 2 VWIM - Uniontown VWIM - Prescott VWIM - Mary Hill East VWIM - Yakima VWIM - Ritzville 1 VWIM - Ritzville 2 69 - Tokio (WB) 50 - Plymouth M - Newman		M - Quincy 1
	4	54 - Plymouth (POE) 26 - Sea Tac (NB)			74 - Home Valley M - Quincy 2 (SB)	12 - Artic
	3	49 - Pasco (NB) 55 - Pasco (SB) 7 - Ft. Lewis (NB) VWIM - Newman Lake	9 - Puyallup 77 - Kelso 33 - Bow Hill (POE)	38 - Stanwood/Bryant 97 - Tonasket 37 - Lake Stevens 91 - Brewster 53 - Cle Elum (WB POE) 92 - Peshastin VWIM - Vantage (I-90) 31 - Sultan	76 - Morton 47 - Rim Rock/Naches 20 - Brady (EB) 19 - Brady (WB) 35 - Anacortes 15 - Port Angeles (WB)	11 - Hoquiam 13 - Forks 14 - Port Angeles (EB) 30 - Sedro Woolley
	2	64 - Spokane (POE)	10 - Gig Harbor 39 - Everett (SB)	48 - Vernita 42 - Toppenish 18 - Buckley 16 - Spanaway 40 - Grandview 66 - Chattaroy 65 - Deer Park 68 - Tokio (EB)	71 - Raymond 51 - Walla Walla 83 - Woodland M - Thornton	82 - Menlo 60 - Rearden
	1		21 - Spring Valley	M - Purdy 67 - Kettle Falls 75 - Goldendale	M - Quincy 2 (NB) M - Winchester 94 - Rock Island M - Othello East M - Othello West M - Rock Island (Old)	

Two-Digit Code = Scale House Number, M = Mobile Site, VWIM = VWIM Sites, n/a = New Facility

High
Medium-High
Medium
Medium-Low
Low

Figure 6-3: Preservation Program Projects – Prioritization Rating Matrix

		Criticality Score				
		5	4	3	2	1
Condition Score	3	26 - Sea Tac (NB) 54 - Plymouth (POE)	72 - Ridgefield (POE) 33 - Bow Hill (POE) 10 - Gig Harbor 9 - Puyallup	48 - Vernita 97 - Tonasket 91 - Brewster 53 - Cle Elum (WB) 37 - Lake Stevens 31 - Sultan 75 - Goldendale 18 - Buckley	M - Quincy 2 (SB) 15 - Port Angeles (WB) 74 - Home Valley 71 - Raymond 76 - Morton	12 - Artie 60 - Rearden 14 - Port Angeles (EB) 30 - Sedro Woolley
	2	64 - Spokane (POE)	43 - Wallula 39 - Everett	38 - Stanwood/Bryant 16 - Spanaway 66 - Chattaroy 40 - Grandview	M - Thornton 35 - Anacortes	11 - Hoquiam
	1	VWIM - Newman Lake 49 - Pasco (NB) 55 - Pasco (SB) 7 - Ft. Lewis (NB)	77 - Kelso 21 - Spring Valley	65 - Deer Park 50 - Plymouth VWIM - Vantage (I-90) 68 - Tokio (EB) 67 - Kettle Falls 52 - Cle Elum (EB) 92 - Peshastin 42 - Toppenish M - Purdy	51 - Walla Walla 94 - Rock Island M - Othello East M - Othello West M - Quincy 2 (NB) M - Rock Island (Old) M - Winchester 47 - Rim Rock/Naches 83 - Woodland 20 - Brady (EB) 19 - Brady (WB)	82 - Menlo 13 - Forks

Two-Digit Code = Scale House Number, M = Mobile Site, VWIM = VWIM Sites

High
Medium-High
Medium
Medium-Low
Low

The Project Prioritization Rating is then the combination of the Criticality Rating and either the Functionality Rating or the Condition Rating. For example, a project with a Criticality Rating of 5 and a Functionality Rating of 3 receives a Prioritization Rating of 5-3 and is assigned an orange level priority.

Note that there are several Facilities that have projects that are included in both the IP and PP requiring coordinated project development. For example, it does not make sense to expend PP funds if it is known that a pending IP project will negate the needs for that expenditure. **Table 6-1** and **Table 6-2** summarize the Improvement Plan and the Preservation Program, respectively, for each Facility and whether the project needs coordination with the other program.

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality- Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
7	5	72	Ridgefield (POE)	I-5	15	4-4	No	F-1	F-1	Upgrade admin building. Add 2nd inspection pit and technology improvements. Note: Funds are included in the FY '15-'17 biennium with construction expected in 2018. Coordinate with Preservation Project.	Yes
8	3	43	Wallula	US 730 / US 12	34	4-4	Yes	F-4	F-7	Add e-Screening, driver interactive kiosk (convert existing building?), and signage. Include site improvements and parking improvements. Coordinate with Preservation Project. Also coordinate with anticipated US 12 improvements.	Yes
8	3	54	Plymouth (POE)	I-82	131	5-4	No	F-1	F-1	Relocate Facility. Add inspection building, add e-Screening northbound. As part of this project, add VWIM southbound on I-82 and VWIM westbound on SR 14. (Included in '17-'19 Biennial Plan request - not funded.) Include abandoning #50 - Plymouth in this project.	NA
5		VWIM	Woodinville VWIM	SR 522	Between 14 and 17	5-5	<i>No/new</i>	NA	F-6	Add VWIM.	NA
8		VWIM	Paterson VWIM	SR 221	North of Paterson and south of Sellards Road.	5-5	<i>No/new</i>	NA	F-6	Add VWIM. (Included in '17 - '19 Biennial Plan request - not funded.)	NA
8		VWIM	Pasco Bypass VWIM 1	North Glade Road	Between W. Sagemoor Rd. and Eltopia W. Road	5-5	<i>No/new</i>	NA	F-6	Add VWIM.	NA
8		VWIM	Pasco Bypass VWIM 2	Frontier Road	Between E. Sagemoor Rd. and E Elm Rd	5-5	<i>No/new</i>	NA	F-6	Add VWIM.	NA
7		VWIM	Ridgefield Bypass VWIM1	NW 31st Ave	Between NW La Center Rd and Pioneer St	4-5	<i>No/new</i>	NA	F-6	Add VWIM.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality- Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
7		VWIM	Ridgefield Bypass VWIM2	NW Timmen Rd	Between NW La Center Rd and NW 279th St	4-5	No/new	NA	F-6	Add VWIM.	NA
4		VWIM	Sedro Woolley VWIM	SR 9	South of SR 542 and north of SR 20 (Approx. MP 60)	4-5	No/new	NA	F-6	Add VWIM. (Included in '17-'19 Biennial Plan request - not funded.)	NA
6		VWIM	Parkland VWIM	SR 512	1	5-5	Yes	F-14	F-6	Upgrade PTR to VWIM.	NA
Overall Map		VWIM	Sprague VWIM	I-90 / US 395	254	4-5	Yes	F-13	F-6	Upgrade PTR w/WIM to VWIM.	NA
2		VWIM	Castle Rock VWIM	SR 411	7.97	4-5	Yes	F-13	F-6	Upgrade PTR w/WIM to VWIM on SR 411 (SB).	NA
2		VWIM	Kelso Bypass VWIM	Pleasant Hill Rd	Between Headquarters Rd and Washburn Rd	4-5	No/new	NA	F-6	Add VWIM.	NA
4		VWIM	Edison VWIM	SR 11	Between 1 and 6	4-5	No/new	NA	F-6	Add VWIM.	NA
5		VWIM	Everett VWIM1	SR 527	Between I-5 and SR 96	4-5	No/new	NA	F-6	Add VWIM.	NA
5		VWIM	Everett VWIM2	SR 99	Between I5 and 7th Ave SE	4-5	No/new	NA	F-6	Add VWIM.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
6	2	25	North Bend (WB)	I-90	25	4-5	Yes	F-4	NA	Stop using Facility at any time. Abandon Facility - remove building and scales, disconnect unnecessary utilities, and modify as needed in order to preclude safety and liability issues.	NA
6	2	26	Sea Tac (NB)	I-5	141	5-4	Yes	F-3	F-2	Add inspection building/pits. Include parking improvements. Rehab/replace approaches. Installation of gate to facilitate scale closure will be completed under Preservation Project.	Yes
6		n/a	North Bend (EB)	I-90	East of SR 18	4-5	No/new	NA	F-1	Construct new F-1 Facility including truck rest parking and secure chain up area. (Included in '17-'19 Biennial Plan request - not funded.)	NA
6	2	27	Sea Tac (SB)	I-5	141	5-5	No	F-3	F-3	Relocate Facility. Construct new F-3 Facility at new site. Currently closed.	NA
6		n/a	Puyallup	Future SR 167 - Limited Access	n/a	4-5	No/new	NA	F-2	Construct new F-2 Facility when new SR 167 limited access hwy built. Expected opening 2030.	NA
8	3	49	Pasco (NB)	US 395	33	5-3	Yes	F-9	F-8	Convert existing PTR south of the Facility to VWIM. Include parking improvements.	NA
8	3	55	Pasco (SB)	US 395	33	5-3	No	F-4	F-4	Add scales for multi-axle weighments. Include parking improvements.	NA
6	1	7	Ft. Lewis (NB)	I-5	117	5-3	Yes	F-3	F-2	Initiate planning project. Consider moving and combining Facility with JBLM at logistics center. Determine if short-term project is needed.	NA
9	4	VWIM	Newman Lake VWIM	SR 290	18	5-3	No	F-6	F-6	Add ALPR.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
6	1	9	Puyallup	SR 167 River Road	5	4-3	Yes	F-4	F-11	Add VWIM. Remove building. Coordinate with Preservation Project for scale removal and pavement rehab/replacement.	Yes
2	5	77	Kelso	I-5	44	4-3	Yes	F-3	F-2	Relocate as site is not big enough to add inspection building. Abandon existing Facility upon completion of new F-2.	NA
4	7	33	Bow Hill (POE)	I-5	235	4-3	No	F-1	F-1	Add inspection pits. Jersey barriers/lane re-striping/parking area pavement replacement to be completed under Preservation Project.	No.
7		VWIM	White Salmon / Washougal VWIM	SR 14	Between 21 and 68	3-5	No/new	NA	F-11	Add VWIM and pull-off site. (Included in '17-'19 Biennial Plan request - not funded.)	NA
1		VWIM	Poulsbo North VWIM	SR 3	Between 54 and 60	3-5	No/new	NA	F-6	Add VWIM.	NA
2		VWIM	Cle Elum Bypass VWIM	West Side Rd	Between Golf Course Rd and 6th Street	3-5	No/new	NA	F-6	Add VWIM.	NA
8		VWIM	SR 22 VWIM	SR 22	Between Toppenish and Prosser (Approx. MP 15)	3-5	No/new	NA	F-6	Add VWIM.	NA
4		VWIM	Stanwood/Bryant VWIM1	SR 9	Between NW La Center Rd and Stanwood Bryant Rd	3-5	No/new	NA	F-6	Add VWIM.	NA
4		VWIM	Stanwood/Bryant VWIM2	Pioneer Hwy	Between Milltown Rd and SR 532	3-5	No/new	NA	F-6	Add VWIM.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality- Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
4		VWIM	Stanwood/Bryant VWIM3	Pacific Hwy	Between Freeborn Rd. and SR 532	3-5	No/new	NA	F-6	Add VWIM.	NA
5		VWIM	Monroe West VWIM	US 2	Between 8 and 14	3-5	No/new	NA	F-11	Add VWIM and pull-off site.	NA
6		VWIM	Algona VWIM	SR 164	Between 2 and 4	3-5	No/new	NA	F-6	Add VWIM.	NA
6		VWIM	McMillan VWIM	SR 162	Between 6 and 9	3-5	No/new	NA	F-6	Add VWIM.	NA
6		VWIM	Yelm VWIM	SR 507	Between 25 and 27	3-5	No/new	NA	F-6	Add VWIM.	NA
Overall Map		VWIM	Spokane VWIM 1	US 195	88	3-5	Yes	F-14	F-6	Upgrade PTR to VWIM.	NA
Overall Map		VWIM	Spokane VWIM 2	SR 27	77	3-5	Yes	F-14	F-6	Upgrade PTR to VWIM.	NA
Overall Map		VWIM	Uniontown VWIM	US 195	6	3-5	Yes	F-14	F-6	Upgrade PTR to VWIM.	NA
Overall Map		VWIM	Prescott VWIM	SR 124	Approx. 30 (between Pasco and Prescott)	3-5	No/new	NA	F-6	Consider upgrading PTR P05 w/WIM on US12 to VWIM (F-6). Or, add VWIM.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
Overall Map		VWIM	Mary Hill East VWIM	SR 14	102	3-5	Yes	F-13	F-6	Upgrade PTR w/WIM to VWIM.	NA
Overall Map		VWIM	Yakima VWIM	I-82	25	3-5	Yes	F-13	F-6	Upgrade PTR w/WIM to VWIM.	NA
3		VWIM	Ritzville VWIM 1	I-90	219	3-5	Yes	F-14	F-11	Upgrade PTR to VWIM and add pull-off on combined I-90/US 395, location TBD.	NA
3		VWIM	Ritzville VWIM 2	US 395	93	3-5	Yes	F-14	F-11	Upgrade PTR to VWIM and add pull-off on combined I-90/US 395, location TBD (this is same pull out as Ritzville VWIM 2).	NA
3	4	69	Tokio (WB)	I-90	231	3-5	Yes	F-4	NA	Facility is currently closed/not used. Abandon Facility - remove building and scales, disconnect unnecessary utilities, and modify as needed in order to preclude safety and liability issues.	NA
8	3	50	Plymouth	SR 14	80	3-5	Yes	F-4	NA	Abandon Facility when new Plymouth POE Facility is complete (Facility #54). Remove building and scales, disconnect unnecessary utilities, and modify as needed to preclude safety and liability issues.	NA
9	4	Mobile	Newman Lake WB	SR 290	Approx. 18	3-5	Yes	F-12	NA	Abandon Facility. Modify as needed in order to preclude safety and liability issues. Note that Facility is currently closed/not used.	NA
2	6	52	Cle Elum (EB)	I-90	80	3-5	Yes	F-4	NA	Stop using Facility when North Bend (EB) is completed. Abandon Facility - remove building and scales, disconnect unnecessary utilities, and modify as needed in order to preclude safety and liability issues.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
4	7	38	Stanwood/Bryant	I-5	212	3-3	Yes	F-3	F-2	Add inspection building. Preservation Project to be completed in Short-Term.	No
3	6	97	Tonasket	US 97	315	3-3	Yes	F-4	F-9	Add "Plug & Run" cabinet. Remove building. Replace scales as part of Preservation Project.	Yes
5	7	37	Lake Stevens	SR 9	17	3-3	Yes	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building when it is no longer viable. Preservation Project includes outdoor lighting rehab/replacement.	No
3	6	91	Brewster	US 97 / SR 17	265	3-3	No	F-4	F-4	Complete Preservation Program Project so that scale is fully operational.	NA
2	6	53	Cle Elum (WB POE)	I-90	80	3-3	No	F-1	F-1	Complete Preservation Program Project so that scale is fully operational.	NA
2	6	92	Peshastin	US 2 / US 97	105	3-3	Yes	F-4	F-8	Convert nearby PTR to VWIM. Add Plug & Run Cabinet. Remove building when no longer viable.	NA
3	6	VWIM	Vantage VWIM (I-90)	I-90	137	3-3	No	F-6	F-6	Add ALPR.	NA
5	7	31	Sultan	US 2	21	3-3	No	F-4	F-4	Replace signage with electronic signage. Complete Preservation Project so that Facility is fully functional.	Yes
9	4	64	Spokane (POE)	I-90	299	5-2	No	F-1	F-1	Upgrade technology when available. Preservation Project includes general repairs.	No

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
6	1	10	Gig Harbor	SR 16	10	4-2	Yes	F-4	F-9	Add "Plug & Run" cabinet. Remove building. Coordinate with Preservation Project.	Yes
5	7	39	Everett (SB)	I-5	188	4-2	No	F-3	F-3	Complete Preservation Program Project so that scale is fully operational and integrated with CVISN.	NA
7	5	74	Home Valley	SR 14	50	2-4	Yes	F-4	F-11	Add VWIM. Remove scales and building and rework site as it is too close to the road. Complete by paving reworked site.	NA
3	6	Mobile	Quincy 2 - SB	SR 281	Approx. 5	2-4	No	F-12	F-12	Complete Preservation Project so that Facility is fully functional.	NA
2	5	76	Morton	US 12	100	2-3	Yes	F-12	F-11	Add VWIM. Remove building to make room for portable weighing, inspection, and parking. Damaged Building will be removed under Preservation Project.	No
2	3	47	Rim Rock/Naches	US 12	191	2-3	Yes	F-9	F-8	Add VWIM.	NA
1	8	20	Brady (EB)	US 12	13	2-3	Yes	F-4	F-3	Add e-Screening.	NA
1	8	19	Brady (WB)	US 12	13	2-3	Yes	F-4	F-3	Add e-Screening.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
4	7	35	Anacortes	SR 20	54	2-3	Yes	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building as it needs repairs.	NA
1	8	15	Port Angeles (WB)	US 101	255	2-3	No	F-4	F-4	Complete Preservation Project so that Facility is fully functional.	NA
3	6	Mobile	Quincy 1	SR 283	Approx. 2	1-5	Yes	F-12	NA	Facility is currently closed/not used. Abandon Facility. Modify as needed in order to preclude safety and liability issues.	NA
1	8	12	Artic	US 101	77	1-4	Yes	F-4	F-8	Use new F-8 Facility and based on use determine if site needs reworking or Facility needs to be relocated.	No
3	3	48	Vernita	SR 24	43	3-2	Yes	F-4	F-9	Add "Plug & Run" cabinet. Remove building. Coordinate with Preservation Project replacement of approaches.	Yes
2	3	42	Toppenish	US 97	56	3-2	Yes	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA
6	1	18	Buckley	SR 410	19	3-2	Yes	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove scales and replace pavement and approaches. Remove overheight detector. Remove building when it is no longer viable.	NA
6	1	16	Spanaway	SR 7	49	3-2	Yes	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove scales if and when pavement is replaced. Coordinate with Preservation Project for building removal.	Yes
8	3	40	Grandview	I-82	76	3-2	Yes	F-3	F-2	Add Inspection Building. Preservation Project includes concrete repair on north side of scale.	No

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
9	4	66	Chattaroy	US 2	302	3-2	Yes	F-4	F-9	Prior to completing project, conduct traffic count with temporary traffic recorder (F-15) to determine if F-9 Facility is warranted or the Facility should be abandoned. Coordinate with Deer Park (#65). If F-9 is warranted, add "Plug & Run" cabinet. Remove building when it is no longer viable. Coordinate with Preservation Project PP-Planning.1.	Yes
9	4	65	Deer Park	US 395	182	3-2	No	F-4	F-4	Prior to completing any project, conduct traffic count with temporary traffic recorder (F-15) to determine if F-4 Facility is warranted or the Facility type should be changed. If F-4 is warranted, upgrade technology/building. If another Facility type is warranted, upgrade accordingly. Coordinate traffic counts and Facility improvements/changes with 66-Chattaroy.	NA
3	4	68	Tokio (EB)	I-90	231	3-2	Yes	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA
1	8	71	Raymond	US 101	57	2-2	Yes	F-4	F-12	Remove scales and building and rework site as it is too close to the road. Complete by paving reworked site.	NA
3	3	51	Walla Walla	US 12	342	2-2	Yes	F-4	F-12	Can begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA
7	5	83	Woodland	SR 503	49	2-2	Yes	F-4	F-12	Can begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects					
						Priority Rating (Criticality-Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?
							Yes/No	From	To		Yes/No/NA
3	4	Mobile	Thornton	US 195	Approx. 54	2-2	No	F-12	F-12	Complete Preservation Project so that Facility is fully functional.	NA
1	8	11	Hoquiam	US 101	91	1-3	Yes	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building when it is no longer viable. Preservation Project (PP-LT.5) rehabs/replaces scale.	No
1	8	13	Forks	US 101	191	1-3	Yes	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building when it is no longer viable.	NA
1	8	14	Port Angeles (EB)	US 101	237	1-3	Yes	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building in order to improve safety and limit liability.	Yes
4	7	30	Sedro Woolley	SR 20	69	1-3	No	F-9	F-9	Add larger scale. Preservation Project includes pavement and curbing replacement.	Yes
1	8	82	Menlo	SR 6	3	1-2	Yes	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA
3	4	60	Rearden	US 2	282	1-2	No	F-4	F-4	Complete Preservation Project so that Facility is fully functional.	NA
6	2	21	Spring Valley	SR 99	7	4-1	No	F-9	F-9	No project/action required.	NA
6	8	Mobile	Purdy	SR 16	Approx. 19	3-1	No	F-12	F-12	Remove scale components if and when pavement is replaced.	NA

Table 6-1: Improvement Plan Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Improvement Plan Projects						
						Priority Rating (Criticality- Functionality)	Facility Classification Change?			Project Description	Coordinate with Preservation Project?	
							Yes/No	From	To		Yes/No/NA	
3	4	67	Kettle Falls	US 395	239	3-1	No	F-9	F-9	No project/action required.	NA	
2	5	75	Goldendale	US 97	13	3-1	No	F-4	F-4	No project/action required.	No	
3	6	Mobile	Quincy 2 - NB	SR 281	Approx. 5	2-1	No	F-12	F-12	Remove scale if and when pavement is replaced.	NA	
3	6	Mobile	Winchester	SR 28	Approx. 38	2-1	No	F-12	F-12	Remove scale if and when pavement is replaced.	NA	
3	6	94	Rock Island	SR 28	9	2-1	No	F-4	F-4	No project/action required.	NA	
3	4	Mobile	Othello East	SR 17	Approx. 33	2-1	No	F-12	F-12	No project/action required.	NA	
3	4	Mobile	Othello West	SR 17	Approx. 33	2-1	No	F-12	F-12	No project/action required.	NA	
3	6	Mobile	Rock Island - Old	SR 28	Approx. 9	2-1	No	F-12	F-12	No project/action required.	NA	

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
6	2	26	Sea Tac (NB)	I-5	141	5-3	Rehab/replace approaches to scales. Install gate to facilitate scale closure. To be completed in conjunction with IP Project.	Yes
8	3	54	Plymouth (POE)	I-82	131	5-3	Repair/replace roof, HVAC systems, and electrical systems.	NA
7	5	72	Ridgefield (POE)	I-5	15	4-3	Rehab/replace approaches, pavement and scales. Will this work be completed with the IP scheduled for 2018 construction? Coordinate with IP Project.	Yes
4	7	33	Bow Hill (POE)	I-5	235	4-3	Install jersey barriers as a safety feature. Re-stripe lanes. Rehab/replace parking area pavement. Inspection pits to be added at a later date under IP Project.	No
6	1	10	Gig Harbor	SR 16	10	4-3	Install a barrier between the Facility and the freeway as a safety feature. Rehab building. Coordinate with IP Project regarding building.	Yes
6	1	9	Puyallup	SR 167 River Road	5	4-3	Remove scales and rehab/replace pavement. Include with IP Project.	Yes
9	4	64	Spokane (POE)	I-90	299	5-2	Repair height detector and flag pole. Replace hazmat signage, inspection bay signage, and work desk in inspection bay. IP Project includes technology upgrades.	No

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
8	3	43	Wallula	US 730 / US 12	34	4-2	Repair building. Coordinate with IP Project.	Yes
5	7	39	Everett (SB)	I-5	188	4-2	Repair and rehabilitate scale so that it is fully operational and integrated with CVISN.	NA
3	3	48	Vernita	SR 24	43	3-3	Rehab/replace approaches. IP Project (IP-ST-6) converts Facility to F-9 (Plug & Run).	Yes
3	6	97	Tonasket	US 97	315	3-3	Replace scales. IP Project includes conversion to F-9 (Plug & Run) Facility.	Yes
3	6	91	Brewster	US 97 / SR 17	265	3-3	Replace scales and signage.	NA
2	6	53	Cle Elum (WB POE)	I-90	80	3-3	Scale is settling. Rehab/replace scale and pavement.	NA
5	7	37	Lake Stevens	SR 9	17	3-3	Rehab/replace outdoor lighting. IP Project converts Facility to F-8 (Plug & Run with VWIM).	No
5	7	31	Sultan	US 2	21	3-3	Rehab/replace building and pavement. Coordinate with IP Project for upgrade to electronic signage.	Yes

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
2	5	75	Goldendale	US 97	13	3-3	Replace scales.	No
6	1	18	Buckley	SR 410	19	3-3	Change in type of Facility negates need for Preservation Program Project.	NA
4	7	38	Stanwood/Bryant	I-5	212	3-2	Clean and repair scale drainage system. Re-stripe lanes. Inspection Building will be added under IP Project. Currently planned for 2021 -2023 biennium.	No
6	1	16	Spanaway	SR 7	49	3-2	Remove building in order to improve safety and limit potential liability. Remove non-functional overhead detector. Coordinate with IP Project.	Yes
9	4	66	Chattaroy	US 2	302	3-2	Coordinate with Planning Project in IP. If F-9 Facility is warranted, repair pavement along north and south sides of scales.	Yes
8	3	40	Grandview	I-82	76	3-2	Repair concrete on border of north side pads. IP Project adds inspection building.	No
3	6	Mobile	Quincy 2 - SB	SR 281	Approx. 5	2-3	Lengthen pull-off area and repair/replace pavement.	NA

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
1	8	15	Port Angeles (WB)	US 101	255	2-3	Rehab/replace scales.	NA
7	5	74	Home Valley	SR 14	50	2-3	Facility is currently closed/not used. Improvement Project negates the need for a Preservation Project.	NA
1	8	71	Raymond	US 101	57	2-3	Improvement Project negates the need to rework the site for the existing Facility.	NA
2	5	76	Morton	US 12	100	2-3	Building was hit and has been damaged. Remove building to improve safety and limit liability.	No
3	4	Mobile	Thornton	US 195	Approx. 54	2-2	Repair/replace pavement.	NA
4	7	35	Anacortes	SR 20	54	2-2	Improvement Project negates the need to repair the building.	NA
1	8	12	Artic	US 101	77	1-3	Convert to F-8 Facility and based on use determine if site needs reworking or Facility needs to be relocated. No Preservation Program Project.	No
3	4	60	Rearden	US 2	282	1-3	Rehab/replace approach and signage.	NA

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
1	8	14	Port Angeles (EB)	US 101	237	1-3	Repair/replace scales. IP Project converts Facility to F-8 (Plug & Run with VWIM).	Yes
4	7	30	Sedro Woolley	SR 20	69	1-3	Rehab/replace pavement and ancillary features (i.e., curbing). Coordinate with IP Project which includes adding a larger scale.	Yes
1	8	11	Hoquiam	US 101	91	1-2	Repair/replace scales. IP Project converts Facility to F-8 (Plug & Run with VWIM).	No
9	4	VWIM	Newman Lake VWIM	SR 290	18	5-1	No project/action required.	NA
8	3	49	Pasco (NB)	US 395	33	5-1	No project/action required.	NA
8	3	55	Pasco (SB)	US 395	33	5-1	No project/action required.	NA
6	1	7	Ft. Lewis (NB)	I-5	117	5-1	No project/action required.	NA
3	3	51	Walla Walla	US 12	342	2-1	No project/action required.	No
2	5	77	Kelso	I-5	44	4-1	No project/action required.	No
6	2	21	Spring Valley	SR 99	7	4-1	No project/action required.	NA
9	4	65	Deer Park	US 395	182	3-1	No project/action required.	NA
8	3	50	Plymouth	SR 14	80	3-1	No project/action required.	NA
3	6	VWIM	Vantage VWIM (I-90)	I-90	137	3-1	No project/action required.	NA

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
3	4	68	Tokio (EB)	I-90	231	3-1	No project/action required.	NA
3	4	67	Kettle Falls	US 395	239	3-1	No project/action required.	NA
2	6	52	Cle Elum (EB)	I-90	80	3-1	No project/action required.	NA
2	6	92	Peshastin	US 2 / US 97	105	3-1	No project/action required.	NA
2	3	42	Toppenish	US 97	56	3-1	No project/action required.	NA
6	8	Mobile	Purdy	SR 16	Approx. 19	3-1	No project/action required.	NA
3	6	94	Rock Island	SR 28	9	2-1	No project/action required.	NA
3	4	Mobile	Othello East	SR 17	Approx. 33	2-1	No project/action required.	NA
3	4	Mobile	Othello West	SR 17	Approx. 33	2-1	No project/action required.	NA
3	6	Mobile	Quincy 2 - NB	SR 281	Approx. 5	2-1	No project/action required.	NA
3	6	Mobile	Rock Island - Old	SR 28	Approx. 9	2-1	No project/action required.	NA
3	6	Mobile	Winchester	SR 28	Approx. 38	2-1	No project/action required.	NA
2	3	47	Rim Rock/Naches	US 12	191	2-1	No project/action required.	NA
7	5	83	Woodland	SR 503	49	2-1	No project/action required.	NA
1	8	20	Brady (EB)	US 12	13	2-1	No project/action required.	NA
1	8	19	Brady (WB)	US 12	13	2-1	No project/action required.	NA

Table 6-2: Preservation Program Projects

Map No.	WSP District	Scalehouse Number	Name / City	State Route	Mile Post	Preservation Program Projects		
						Priority Rating (Criticality-Condition)	Project Description	Coordinate with Improvement Plan? Yes/No/NA
1	8	82	Menlo	SR 6	3	1-1	No project/action required.	NA
1	8	13	Forks	US 101	191	1-1	No project/action required.	NA
6	2	27	Sea Tac (SB)	I-5	141	5-NA	No project/action required.	NA
6	2	25	North Bend (WB)	I-90	25	4-NA	No project/action required.	NA
3	4	69	Tokio (WB)	I-90	231	3-NA	No project/action required.	NA
9	4	Mobile	Newman Lake WB	SR 290	Approx. 18	3-NA	No project/action required.	NA
3	6	Mobile	Quincy 1	SR 283	Approx. 2	1-NA	No project/action required.	NA

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Project Costing

Project costing has been completed for both IP and PP projects. IP planning level cost estimates have been developed based on several sources of information including WSDOT construction unit prices, building prices from the building industry, and weigh/inspection station information from the current maintenance contract with IRD covering both hardware and software. **Appendix F** presents the cost estimation sources and assumptions. For PP R³ projects, cost estimates have been developed based on review of site assessments by WSP and typical costs for similar work. Right-of-way costs are not included because they vary across the state. These costs will be addressed when a project is initiated.

One cost assumption is that all CVES sites use cellular communication that can access the existing communications backbone in the state to transmit and receive commercial vehicle data. The cost estimates include cellular communication and connection equipment to backbone fiber, but do not include any backbone communication infrastructure. The cost estimates are based in large part on unit costs for transportation projects in Washington for the year ending June 6, 2017. A basic assumption is that CVES projects will be incorporated into larger roadway projects to take advantage of economies of scale. If projects are completed standalone, costs would likely be substantially higher (as much as 50 percent based on experience in Montana).

Another cost to consider over time is for periodic maintenance of WSDOT's CVISN e-Screening system. Maintenance will require replacing computer hardware and updating software. The cost for this work will be determined as the actual needs are identified.

Finally, another cost to consider is whether funding comes from Washington State sources or from the Federal government. The WSP Property Management Division experience has been that projects funded by the Federal government can cost up to 25 percent more than those funded by the State due to programmatic requirements.

Developing the Initial Improvement Plan and Preservation Program

Developing the Initial IP was an iterative process that had the end goal of balancing prioritized needs with assumed available funding. The timeframes considered in the programming were:

- Short-Term – includes funding biennials 2015-2017, 2017-2019, 2019-2021, and 2021-2023.
- Mid-Term – includes funding biennials 2023-2025 and 2025-2027.
- Long-Term – includes funding biennials 2027-2029, 2029-2031, 2031-2033, and 2033+.

The basic approach to the programming effort included the following considerations:

- Prioritization Rating (per **Figure 6-2** and **Figure 6-3**).
- Building and equipment removals should be completed as soon as possible when safety improvements result.
- Other projects that result in safety improvements should be completed as soon as possible.

- Abandoning facilities should be completed as soon as possible to eliminate ongoing operations and maintenance costs.
- Facilities intended to become F-12 pull-off sites should be converted as soon as possible to eliminate ongoing operations and maintenance costs.
- Highest priority projects should be completed as soon as possible.
- Relocations and high level new facilities will require significant planning and programming and cannot be completed immediately.
- Using the planning level cost estimates, balance funding needs across the biennial funding periods.

The Initial IP that was developed based on this approach is shown in **Table 6-3** and the Initial PP is shown in **Table 6-4**.

Refining Project Programming

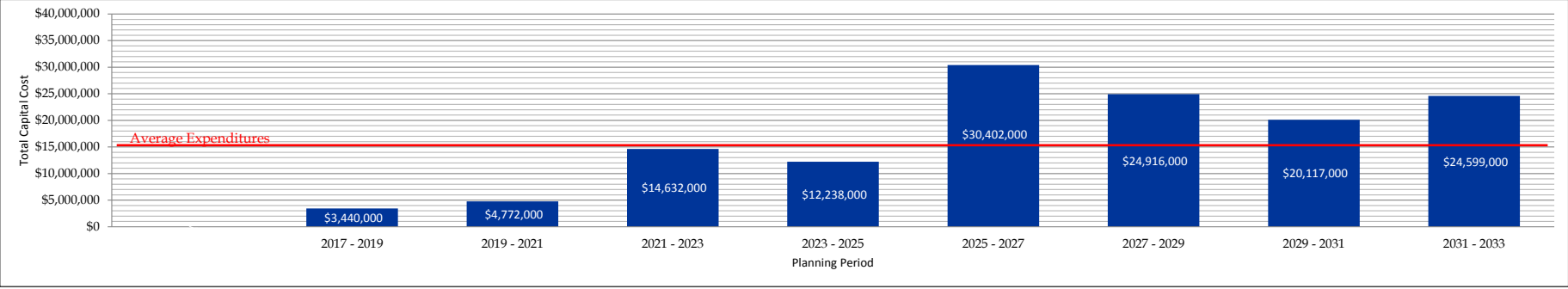
Each year, WSDOT and WSP will review performance and needs collectively and will then work together to develop a Weigh Station Delivery Plan. The priorities identified in the Strategic Plan require more funding than has been historically provided by the state. Refined project programming needs to address the fact that program funding for CVES facility actions must compete with other state programs for funding and undoubtedly will be constrained. At this level, prioritization addresses costs, the number of projects that can be managed at the same time, how facilities interrelate, and likely availability of funds over time. In Washington State, this means that the biennial legislative budget process must be directly taken into account. That process occurs in odd numbered years, with the 2017-2019 biennium program covering the period from July 1, 2017 through June 30, 2019, corresponding to the state's fiscal year.

Table 6-3: Improvement Plan

Improvement Plan (IP)

Plan Years 2017 - 2033
Improvement Plan Developed August 2017

Notes:
1) Annual inflation of 3% is assumed.



Base Plan Year	2017
Yearly Inflation	3.0%
Total Number of Plan Items	101
Number of Plan Items with Cost >\$0	83
Total IP Cost (2017 - 2033)	\$135,116,000
Expenditures Not Programmed (2033+)	\$29,846,000
Maximum Biennial Expenditure (2025-2027)	\$30,402,000
Average Biennial Expenditure (2017 - 2033)	\$16,890,000

Map No.	WSP District	Scalehouse No.	Name / City	Project No.	Facility Class From	Facility Class To	Project Description	Coordinate with Preservation Project	Priority Rating (Criticality - Functionality)	Planning Year Cost	2015 - 2017	2017 - 2019	2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
7	5	72	Ridgefield (POE)	IP-1	F-1	F-1	Upgrade admin building. Add 2nd inspection pit and technology improvements. Note: Funds are included in the FY '15-'17 biennium with construction expected in 2018. Coordinate with Preservation Project (PP-ST.2).	Yes	4-4	\$3,160,000	\$0	\$3,160,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	3	54	Plymouth (POE)	IP-ST-1	F-1	F-1	Relocate Facility. Add inspection building, add e-Screening northbound. As part of this project, add VWIM southbound on I-82 and VWIM westbound on SR 14. (Included in '17-'19 Biennial Plan request - not funded.) Include abandoning #50 - Plymouth in this project.	NA	5-4	\$13,000,000	\$0	\$0	\$0	\$14,632,000	\$0	\$0	\$0	\$0	\$0	\$0
8	3	50	Plymouth	IP-ST-1	F-4	NA	Abandon Facility when new #54 - Plymouth (POE) is complete. Modify as needed in order to preclude safety and liability issues. This project should be part of the project at 54 Plymouth (POE).	NA	3-5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	1	10	Gig Harbor	IP-ST-2	F-4	F-9	Add "Plug & Run" cabinet. Remove building. Coordinate with Preservation Project (PP-ST.4).	Yes	4-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	5	74	Home Valley	IP-ST-3	F-4	F-11	Add VWIM. Remove scales and building and rework site as it is too close to the road. Complete by paving reworked site.	NA	2-4	\$350,000	\$0	\$0	\$371,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3	48	Vernita	IP-ST-4	F-4	F-9	Add "Plug & Run" cabinet. Remove building. Coordinate with Preservation Project (PP-ST.9) replacement of approaches.	Yes	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	71	Raymond	IP-ST-5	F-4	F-12	Remove scales and building and rework site as it is too close to the road. Complete by paving reworked site.	NA	2-2	\$80,000	\$0	\$0	\$85,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	NA	VWIM	Woodinville VWIM	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	5-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	NA	VWIM	Paterson VWIM	IP-ST-VWIM-1	NA	F-6	Add VWIM. (Included in '17 - '19 Biennial Plan request - not funded.)	NA	5-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	NA	VWIM	Pasco Bypass VWIM 1	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	5-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	NA	VWIM	Pasco Bypass VWIM 2	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	5-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	NA	VWIM	Ridgefield Bypass VWIM1	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	NA	VWIM	Ridgefield Bypass VWIM2	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	NA	VWIM	Sedro Woolley VWIM	IP-ST-VWIM-1	NA	F-6	Add VWIM. (Included in '17-'19 Biennial Plan request - not funded.)	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	NA	VWIM	Parkland VWIM	IP-ST-VWIM-1	F-14	F-6	Upgrade PTR to VWIM.	NA	5-5	\$240,000	\$0	\$0	\$255,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Table 6-3: Improvement Plan

Map No.	WSP District	Scalehouse No.	Name / City	Project No.	Facility Class From	Facility Class To	Project Description	Coordinate with Preservation Project	Priority Rating (Criticality - Functionality)	Planning Year Cost	2015 - 2017	2017 - 2019	2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
Overall	NA	VWIM	Sprague VWIM	IP-ST-VWIM-1	F-13	F-6	Upgrade PTR w/WIM to VWIM.	NA	4-5	\$240,000	\$0	\$0	\$255,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	NA	VWIM	Castle Rock VWIM	IP-ST-VWIM-1	F-13	F-6	Upgrade PTR w/WIM to VWIM on SR 411 (SB).	NA	4-5	\$240,000	\$0	\$0	\$255,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	NA	VWIM	Kelso Bypass VWIM	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	NA	VWIM	Edison VWIM	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	NA	VWIM	Everett VWIM1	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	NA	VWIM	Everett VWIM2	IP-ST-VWIM-1	NA	F-6	Add VWIM.	NA	4-5	\$280,000	\$0	\$0	\$297,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	68	Tokio (EB)	IP-F12	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced. Note that Facility is currently closed/not used.	NA	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	3	42	Toppenish	IP-F12	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	1	18	Buckley	IP-F12	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove scales and replace pavement and approaches. Remove overheight detector. Remove building when it is no longer viable.	NA	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	1	16	Spanaway	IP-F12	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove scales if and when pavement is replaced. Coordinate with Preservation Project (PP-ST.5) for building removal.	Yes	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3	51	Walla Walla	IP-F12	F-4	F-12	Can begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA	2-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	5	83	Woodland	IP-F12	F-4	F-12	Can begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA	2-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	82	Menlo	IP-F12	F-4	F-12	Begin using Facility as F-12 at any time. Disconnect unnecessary utilities. Remove building when it is no longer viable. Remove scales if and when pavement is replaced.	NA	1-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	25	North Bend (WB)	IP-Abandon	F-4	NA	Stop using Facility at any time. Abandon Facility - remove building and scales, disconnect unnecessary utilities, and modify as needed in order to preclude safety and liability issues.	NA	4-5	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	4	Mobile	Newman Lake WB	IP-Abandon	F-12	NA	Abandon Facility. Modify as needed in order to preclude safety and liability issues. Note that Facility is currently closed/not used.	NA	3-5	\$10,000	\$0	\$0	\$11,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	69	Tokio (WB)	IP-Abandon	F-4	NA	Facility is currently closed / not used. Abandon Facility - remove building and scales, disconnect unnecessary utilities, and modify as needed in order to preclude safety and liability issues.	NA	3-5	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	6	52	Cle Elum (EB)	IP-Abandon	F-4	NA	Stop using facility when North Bend (EB) is completed. Abandon Facility - remove building and scales, disconnect unnecessary utilities, and modify as needed in order to preclude safety and liability issues.	NA	3-5	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Quincy 1	IP-Abandon	F-12	NA	Facility is currently closed / not used. Abandon Facility. Modify as needed in order to preclude safety and liability issues.	NA	1-5	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	26	Sea Tac (NB)	IP-MT-1	F-3	F-2	Add inspection building/pits. Include parking improvements. Rehab/replace approaches. Installation of gate to facilitate scale closure will be completed under Preservation Project (PP-MT.1).	Yes	5-4	\$5,140,000	\$0	\$0	\$0	\$0	\$6,137,000	\$0	\$0	\$0	\$0	\$0
8	3	49	Pasco (NB)	IP-MT-2	F-9	F-8	Convert existing PTR south of the Facility to VWIM. Include parking improvements.	NA	5-3	\$120,000	\$0	\$0	\$0	\$0	\$143,000	\$0	\$0	\$0	\$0	\$0
8	3	55	Pasco (SB)	IP-MT-3	F-4	F-4	Add scales for multi-axle weighments. Include parking improvements.	NA	5-3	\$330,000	\$0	\$0	\$0	\$0	\$394,000	\$0	\$0	\$0	\$0	\$0
7	NA	VWIM	White Salmon / Washougal VWIM	IP-MT-4	NA	F-11	Add VWIM and pull-off site. (Included in '17-'19 Biennial Plan request - not funded.)	NA	3-5	\$2,300,000	\$0	\$0	\$0	\$0	\$2,746,000	\$0	\$0	\$0	\$0	\$0
4	7	38	Stanwood/ Bryant	IP-MT-5	F-3	F-2	Add inspection building. Preservation Project (PP-ST.10) to be completed in Short-Term.	No	3-3	\$2,040,000	\$0	\$0	\$0	\$0	\$2,436,000	\$0	\$0	\$0	\$0	\$0
3	6	97	Tonasket	IP-MT-6	F-4	F-9	Add "Plug & Run" cabinet. Remove building. Replace scales as part of Preservation Project (PP-MT.3).	Yes	3-3	\$20,000	\$0	\$0	\$0	\$0	\$24,000	\$0	\$0	\$0	\$0	\$0

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6	NA	n/a	North Bend (EB)	IP-MT-7	NA	F-1	Construct new F-1 Facility including truck rest parking and secure chain up area. (Included in '17-'19 Biennial Plan request - not funded.)	NA	4-5	\$24,000,000	\$0	\$0	\$0	\$0	\$0	\$30,402,000	\$0	\$0	\$0	\$0
6	1	9	Puyallup	IP-MT-VWIM-1	F-4	F-11	Add VWIM. Remove building. Include Preservation Project (PP-MT.2) to remove scales and rehab/replace pavement.	Yes	4-3	\$300,000	\$0	\$0	\$0	\$0	\$358,000	\$0	\$0	\$0	\$0	\$0
1	NA	VWIM	Poulsbo North VWIM	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
2	NA	VWIM	Cle Elum Bypass VWIM	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
8	NA	VWIM	SR 22 VWIM	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
4	NA	VWIM	Stanwood/Bryant VWIM1	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
4	NA	VWIM	Stanwood/Bryant VWIM2	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
4	NA	VWIM	Stanwood/Bryant VWIM3	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
5	NA	VWIM	Monroe West VWIM	IP-VWIM -LT-1	NA	F-11	Add VWIM and pull-off site.	NA	3-5	\$2,300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,479,000	\$0
6	NA	VWIM	Algona VWIM	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
6	NA	VWIM	McMillan VWIM	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
6	NA	VWIM	Yelm VWIM	IP-VWIM -LT-1	NA	F-6	Add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
Overall	NA	VWIM	Spokane VWIM 1	IP-VWIM -LT-1	F-14	F-6	Upgrade PTR to VWIM.	NA	3-5	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
Overall	NA	VWIM	Spokane VWIM 2	IP-VWIM -LT-1	F-14	F-6	Upgrade PTR to VWIM.	NA	3-5	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
Overall	NA	VWIM	Uniontown VWIM	IP-VWIM -LT-1	F-14	F-6	Upgrade PTR to VWIM.	NA	3-5	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
Overall	NA	VWIM	Prescott VWIM	IP-VWIM -LT-1	NA	F-6	Consider upgrading PTR P05 w/WIM on US12 to VWIM (F-6). Or, add VWIM.	NA	3-5	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424,000	\$0
Overall	NA	VWIM	Mary Hill East VWIM	IP-VWIM -LT-1	F-13	F-6	Upgrade PTR w/WIM to VWIM.	NA	3-5	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
Overall	NA	VWIM	Yakima VWIM	IP-VWIM -LT-1	F-13	F-6	Upgrade PTR w/WIM to VWIM.	NA	3-5	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
2	5	76	Morton	IP-VWIM-LT-2	F-12	F-11	Add VWIM, Remove building to make room for portable weighing, inspection, and parking. Damaged Building will be removed under Preservation Project (PP-ST-6).	No	2-3	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$449,000
2	3	47	Rim Rock/Naches	IP-VWIM-LT-2	F-9	F-8	Add VWIM.	NA	2-3	\$280,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$449,000
8	3	43	Wallula	IP-LT-1	F-4	F-7	Add e-Screening, driver interactive kiosk (convert existing building 7), and signage. Include site improvements and parking improvements. Coordinate with anticipated US 12 improvements.	No	4-4	\$3,580,000	\$0	\$0	\$0	\$0	\$0	\$0	\$4,811,000	\$0	\$0	\$0
2	5	77	Kelso	IP-LT-2	F-3	F-2	Relocate as site is not big enough to add inspection building. Abandon existing Facility upon completion of new F-2.	NA	4-3	\$14,160,000	\$0	\$0	\$0	\$0	\$0	\$0	\$19,030,000	\$0	\$0	\$0
4	7	33	Bow Hill (POE)	IP-LT-3	F-1	F-1	Add inspection pits. Jersey barriers/lane re-striping/parking area pavement replacement to be completed under Preservation Project (PP-ST.3).	No.	4-3	\$800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,075,000	\$0	\$0	\$0
6	NA	n/a	Puyallup	IP-LT-4	NA	F-2	Construct new F-2 Facility when new SR 167 limited access hwy built. Expected opening 2030.	NA	4-5	\$14,110,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,117,000	\$0	\$0
5	7	31	Sultan	IP-LT-6	F-4	F-4	Replace signage with electronic signage. Complete Preservation Project (PP-LT.1) so that Facility is fully functional.	Yes	3-3	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$106,000	\$0

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3	NA	VWIM	Ritzville VWIM 1	IP-LT-7	F-14	F-11	Upgrade PTR to VWIM and add pull-off on combined I-90/US 395, location TBD.	NA	3-5	\$3,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,445,000	\$0
3	NA	VWIM	Ritzville VWIM 2	IP-LT-7	F-14	F-11	Upgrade PTR to VWIM and add pull-off on combined I-90/US 395, location TBD (this is same pull out as Ritzville VWIM 2).	NA	3-5	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
5	7	37	Lake Stevens	IP-LT-8	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building when it is no longer viable. Preservation Project (PP-ST.12) includes outdoor lighting rehab/replacement.	No	3-3	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$454,000	\$0
9	4	64	Spokane (POE)	IP-LT-9	F-1	F-1	Upgrade technology when available. Preservation Project (PP-ST.1) includes general repairs.	No	5-2	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$151,000	\$0
1	8	11	Hoquiam	IP-LT-10	F-4	F-8	Add VWIM. Add Plug & Run cabinet. Remove building when it is no longer viable.	No	1-3	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$454,000	\$0
1	8	20	Brady (EB)	IP-LT-11	F-4	F-3	Add e-Screening.	NA	2-3	\$900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,361,000	\$0
1	8	19	Brady (WB)	IP-LT-12	F-4	F-3	Add e-Screening.	NA	2-3	\$900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,361,000	\$0
4	7	35	Anacortes	IP-LT-13	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building as it needs repairs.	NA	2-3	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$454,000	\$0
8	3	40	Grandview	IP-LT-14	F-3	F-2	Add Inspection Building. Preservation Project (PP-MT.6) includes concrete repair on north side of scale.	No	3-2	\$2,040,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,086,000	\$0
2	6	92	Peshastin	IP-LT-15	F-4	F-8	Convert nearby PTR to VWIM. Add Plug & Run Cabinet. Remove building when no longer viable.	NA	3-3	\$240,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363,000	\$0
1	8	13	Forks	IP-LT-16	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building when it is no longer viable.	NA	1-3	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$454,000	\$0
1	8	14	Port Angeles (EB)	IP-LT-17	F-4	F-8	Add VWIM. Add Plug & Run Cabinet. Remove building in order to improve safety and limit liability. Preservation Project (PP-LT.3) includes scale rehab/replaceent.	Yes	1-3	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$454,000	\$0
4	7	30	Sedro Woolley	IP-LT-18	F-9	F-9	Add larger scale. Preservation Project (PP-LT.4) includes pavement and curbing replacement.	Yes	1-3	\$310,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$469,000	\$0
6	8	Mobile	Purdy	IP-LT-19	F-12	F-12	Remove scale components if and when pavement is replaced.	NA	3-1	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0
3	6	Mobile	Quincy 2 - NB	IP-LT-20	F-12	F-12	Remove scale if and when pavement is replaced.	NA	2-1	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0
3	6	Mobile	Winchester	IP-LT-21	F-12	F-12	Remove scale if and when pavement is replaced.	NA	2-1	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,000	\$0
6	2	27	Sea Tac (SB)	IP-LT-22	F-3	F-3	Relocate Facility. Construct new F-3 Facility at new site. Currently closed.	NA	5-5	\$17,740,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,467,000
1	8	12	Artic	IP-LT-23	F-4	F-8	Use new F-8 facility and based on use determine if site needs reworking or facility needs to be relocated. Add VWIM. Add Plug & Run Cabinet. Remove building when it is no longer viable.	No	1-4	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$481,000
9	4	66	Chattaroy	Planning.1	F-4	F-9	Prior to completing project, conduct traffic count with temporary traffic recorder (F-15) to determine if F-9 Facility is warranted or the Facility should be abandoned. Coordinate with Deer Park (#65). If F-9 is warranted, add "Plug & Run" cabinet. Remove building when it is no longer viable. Coordinate with Preservation Project PP-Planning.1.	Yes	3-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	4	65	Deer Park	Planning.1	F-4	F-4	Prior to completing any project, conduct traffic count with temporary traffic recorder (F-15) to determine if F-4 Facility is warranted or the Facility type should be changed. If F-4 is warranted, upgrade technology/building. If another Facility type is warranted, upgrade accordingly. Coordinate traffic counts and Facility improvements/changes with 66-Chattaroy.	NA	3-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	1	7	Ft. Lewis (NB)	Planning.2	F-3	F-2	Initiate planning project. Consider moving and combining Facility with JBLM at logistics center.	NA	5-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	5	75	Goldendale	NA	F-4	F-4	No action required.	No	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	91	Brewster	NA	F-4	F-4	Complete Preservation Program Project so that scale is fully operational.	NA	3-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Table 6-3: Improvement Plan

Map No.	WSP District	Scalehouse No.	Name / City	Project No.	Facility Class From	Facility Class To	Project Description	Coordinate with Preservation Project	Priority Rating (Criticality - Functionality)	Planning Year Cost	2015 - 2017	2017 - 2019	2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
2	6	53	Cle Elum (WB POE)	NA	F-1	F-1	Complete Preservation Program Project so that scale is fully operational.	NA	3-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Quincy 2 - SB	NA	F-12	F-12	Complete Preservation Project so that Facility is fully functional.	NA	2-4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	7	39	Everett (SB)	NA	F-3	F-3	Complete Preservation Program Project so that scale is fully operational and integrated with CVISN.	NA	4-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	Mobile	Thornton	NA	F-12	F-12	Complete Preservation Project so that Facility is fully functional.	NA	2-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	15	Port Angeles (WB)	NA	F-4	F-4	Complete Preservation Project so that Facility is fully functional.	NA	2-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	60	Rearden	NA	F-4	F-4	Complete Preservation Project so that Facility is fully functional.	NA	1-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	4	VWIM	Newman Lake VWIM	NA	F-6	F-6	Add ALPR.	NA	5-3	\$120,000	\$0	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	21	Spring Valley	NA	F-9	F-9	No action required.	NA	4-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	VWIM	Vantage VWIM (1-90)	NA	F-6	F-6	Add ALPR.	NA	3-3	\$160,000	\$0	\$160,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	67	Kettle Falls	NA	F-9	F-9	No action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	94	Rock Island	NA	F-4	F-4	No action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	Mobile	Othello East	NA	F-12	F-12	No action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	Mobile	Othello West	NA	F-12	F-12	No action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Rock Island - Old	NA	F-12	F-12	No action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total											\$0	\$3,440,000	\$4,772,000	\$14,632,000	\$12,238,000	\$30,402,000	\$24,916,000	\$20,117,000	\$24,599,000	\$29,846,000

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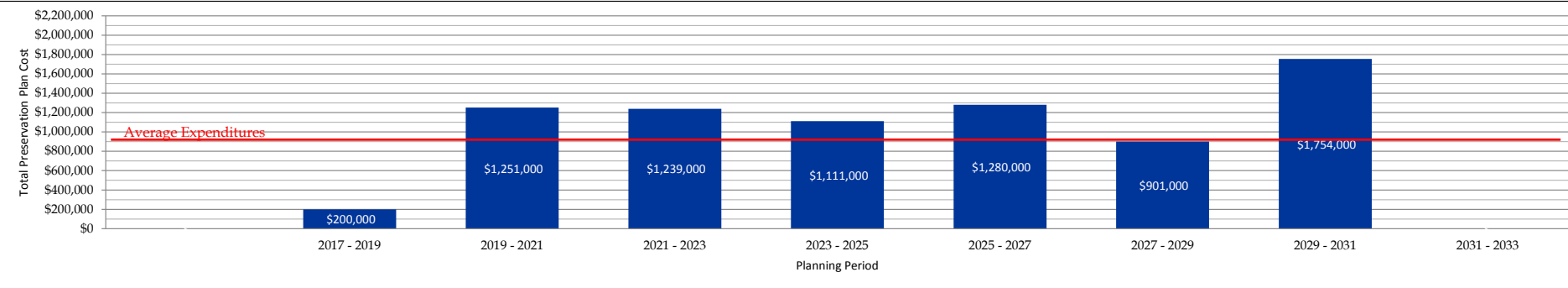
Table 6-4: Preservation Program

Preservation Program (PP)

Program Years 2017 - 2033
Preservation Program Developed August 2017

Priority	2017 - 2019		2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
High	\$ -	\$ 200,000	\$ 1,114,000	\$ 709,000	\$ 263,000	\$ -	\$ -	\$ -	\$ -	\$ -
Medium - High	\$ -	\$ -	\$ 95,000	\$ 530,000	\$ 848,000	\$ 393,000	\$ -	\$ 1,526,000	\$ -	\$ -
Medium	\$ -	\$ -	\$ 42,000	\$ -	\$ -	\$ 887,000	\$ -	\$ 43,000	\$ -	\$ -
Medium - Low	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 901,000	\$ 185,000	\$ -	\$ -
Low	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ -	\$ 200,000	\$ 1,251,000	\$ 1,239,000	\$ 1,111,000	\$ 1,280,000	\$ 901,000	\$ 1,754,000	\$ -	\$ -

Notes:
1) Annual inflation of 3% is assumed.



Base Plan Year	2017
Yearly Inflation	3.0%
Total Number of Program Items	67
Number of Programmed Items with Cost >\$0	28
Total Preservation Program Cost (2017 - 2033)	\$7,736,000
Expenditures Not Programmed (2033+)	\$0
Maximum Biennial Expenditure (2029-2031)	\$1,754,000
Average Expenditure per Biennial (2017-2033)	\$967,000

Map No.	WSP District	Scalehouse No.	Name / City	Project No.	Project Description	Coordinate with Improvement Plan?	Priority Rating (Criticality - Functionality)	Planning Year Cost	2015 - 2017	2017 - 2019	2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
9	4	64	Spokane (POE)	PP-ST.1	Repair height detector and flag pole. Replace hazmat signage, inspection bay signage, and work desk in inspection bay. IP Project (IP-LT-9) includes technology upgrades.	No	5-2	\$30,000	\$0	\$0	\$32,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	26	Sea Tac (NB)	PP-MT.1	Rehab/replace approaches to scales. Install gate to facilitate scale closure. To be completed in conjunction with IP Project (IP-MT-1).	Yes	5-3	\$60,000	\$0	\$0	\$0	\$0	\$72,000	\$0	\$0	\$0	\$0	\$0
7	5	72	Ridgefield (POE)	PP-ST.2	Rehab/replace approaches, pavement and scales. Will this work be completed with the IP scheduled for 2018 construction? Coordinate with IP Project (IP-1).	Yes	4-3	\$410,000	\$0	\$0	\$435,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	7	33	Bow Hill (POE)	PP-ST.3	Install jersey barriers as a safety feature. Re-stripe lanes. Rehab/replace parking area pavement. Inspection pits to be added at a later date under IP Project (IP-LT-3).	No	4-3	\$610,000	\$0	\$0	\$647,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	1	10	Gig Harbor	PP-ST.4	Install a barrier between the Facility and the freeway as a safety feature. Coordinate with IP Project (IP-ST-2) regarding building.	Yes	4-3	\$630,000	\$0	\$0	\$0	\$709,000	\$0	\$0	\$0	\$0	\$0	\$0
6	1	9	Puyallup	PP-MT.2	Remove scales and rehab/replace pavement.. Include with IP Project (IP-MT-VWIM-1).	Yes	4-3	\$160,000	\$0	\$0	\$0	\$0	\$191,000	\$0	\$0	\$0	\$0	\$0
6	1	16	Spanaway	PP-ST.5	Remove building in order to improve safety and limit potential liability. Remove non-functional overhead detector. Coordinate with IP Project (IP F-12).	Yes	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	12	Artic	NA	Convert to F-8 facility and based on use determine if site needs reworking or facility needs to be relocated.	No	1-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	5	76	Morton	PP-ST.6	Building was hit and has been damaged. Remove building to improve safety and limit liability.	No	2-3	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	3	43	Wallula	PP-ST.7	Repair building.	No	4-2	\$40,000	\$0	\$0	\$42,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	7	39	Everett (SB)	PP-ST.8	Repair and rehabilitate scale so that it is fully operational and integrated with CVISN.	NA	4-2	\$100,000	\$0	\$0	\$0	\$113,000	\$0	\$0	\$0	\$0	\$0	\$0
3	3	48	Vernita	PP-ST.9	Rehab/replace approaches. IP Project (IP-ST-4) converts Facility to F-9 (Plug & Run).	Yes	3-3	\$60,000	\$0	\$0	\$0	\$68,000	\$0	\$0	\$0	\$0	\$0	\$0
4	7	38	Stanwood/Bryant	PP-ST.10	Clean and repair scale drainage system. Re-stripe lanes. Inspection Building will be added under IP Project (IP MT-5).	No	3-2	\$20,000	\$0	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	97	Tonasket	PP-MT.3	Replace scales. IP Project (IP-MT-6) includes conversion to F-9 (Plug & Run) Facility.	Yes	3-3	\$310,000	\$0	\$0	\$0	\$0	\$370,000	\$0	\$0	\$0	\$0	\$0
3	6	91	Brewster	PP-ST.11	Replace scales and signage.	NA	3-3	\$310,000	\$0	\$0	\$0	\$349,000	\$0	\$0	\$0	\$0	\$0	\$0
2	6	53	Cle Elum (WB POE)	PP-MT.4	Scale is settling. Rehab/replace scale and pavement.	NA	3-3	\$400,000	\$0	\$0	\$0	\$0	\$478,000	\$0	\$0	\$0	\$0	\$0
5	7	37	Lake Stevens	PP-ST.12	Rehab/replace outdoor lighting. IP Project (IP-LT-8) converts Facility to F-8 (Plug&Run with VWIM).	No	3-3	\$30,000	\$0	\$0	\$32,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	3	54	Plymouth (POE)	PP-ST-13	Repair / replace roof, HVAC systems and electrical systems.	NA	5-3	\$200,000	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Table 6-4: Preservation Program

Map No.	WSP District	Scalehouse No.	Name / City	Project No.	Project Description	Coordinate with Improvement Plan?	Priority Rating (Criticality - Functionality)	Planning Year Cost	2015 - 2017	2017 - 2019	2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
5	7	31	Sultan	PP-LT.1	Rehab/replace building and pavement. Coordinate with IP Project (IP-LT-6) for upgrade to electronic signage.	Yes	3-3	\$1,070,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,526,000	\$0	\$0
2	5	75	Goldendale	PP-MT.5	Replace scales.	No	3-3	\$310,000	\$0	\$0	\$0	\$0	\$0	\$393,000	\$0	\$0	\$0	\$0
9	4	66	Chattaroy	PP-Planning.1	Coordinate with IP Project (Planning.1). If F-9 Facility is warranted, repair pavement along north and south sides of scales.	Yes	3-2	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,000	\$0	\$0
8	3	40	Grandview	PP-MT.6	Repair concrete on border of north side pads. IP Project (IP-LT-14) adds inspection building.	No	3-2	\$30,000	\$0	\$0	\$0	\$0	\$0	\$38,000	\$0	\$0	\$0	\$0
3	6	Mobile	Quincy 2 - SB	PP-MT.7	Lengthen pull-off area and repair/replace pavement.	NA	2-3	\$100,000	\$0	\$0	\$0	\$0	\$0	\$127,000	\$0	\$0	\$0	\$0
3	4	Mobile	Thornton	PP-MT.8	Repair/replace pavement.	NA	2-2	\$260,000	\$0	\$0	\$0	\$0	\$0	\$329,000	\$0	\$0	\$0	\$0
1	8	15	Port Angeles (WB)	PP-MT.9	Rehab/replace scales.	NA	2-3	\$310,000	\$0	\$0	\$0	\$0	\$0	\$393,000	\$0	\$0	\$0	\$0
3	4	60	Rearden	PP-LT.2	Rehab/replace approach and signage.	NA	1-3	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$67,000	\$0	\$0	\$0
1	8	14	Port Angeles (EB)	PP-LT.3	Repair/replace scales. IP Project (IP-LT-17) converts Facility to F-8 (Plug & Run with VWIM).	Yes	1-3	\$310,000	\$0	\$0	\$0	\$0	\$0	\$0	\$417,000	\$0	\$0	\$0
4	7	30	Sedro Woolley	PP-LT.4	Rehab/replace pavement and ancillary features (i.e., curbing). Coordinate with IP Project (IP-LT-18) which includes adding a larger scale.	Yes	1-3	\$130,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$185,000	\$0	\$0
1	8	11	Hoquiam	PP-LT.5	Repair/replace scales. IP Project (IP-LT-10) converts Facility to F-8 (Plug & Run with VWIM).	No	1-2	\$310,000	\$0	\$0	\$0	\$0	\$0	\$0	\$417,000	\$0	\$0	\$0
6	1	18	Buckley	NA	Change in type of Facility negates need for Preservation Program Project.	NA	3-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	5	74	Home Valley	NA	Facility is currently closed/not used. Capital Improvement Project negates the need for a Preservation Project.	NA	2-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	71	Raymond	NA	Capital Improvement Project negates the need to rework the site for the existing Facility.	NA	2-3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	7	35	Anacortes	NA	Capital Improvement Project negates the need to repair the building.	NA	2-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	4	VWIM	Newman Lake VWIM	NA	No project / action required.	NA	5-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	3	49	Pasco (NB)	NA	No project / action required.	NA	5-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	3	55	Pasco (SB)	NA	No project / action required.	NA	5-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	1	7	Ft. Lewis (NB)	NA	No project / action required.	NA	5-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	27	Sea Tac (SB)	NA	No project / action required.	NA	5-NA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3	51	Walla Walla	NA	No project / action required.	No	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	5	77	Kelso	NA	No project / action required.	No	4-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	25	North Bend (WB)	NA	No project / action required.	NA	4-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	2	21	Spring Valley	NA	No project / action required.	NA	4-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	4	65	Deer Park	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	4	Mobile	Newman Lake WB	NA	No project / action required.	NA	3-NA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	3	50	Plymouth	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	VWIM	Vantage VWIM (I-90)	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Table 6-4: Preservation Program

Map No.	WSP District	Scalehouse No.	Name / City	Project No.	Project Description	Coordinate with Improvement Plan?	Priority Rating (Criticality - Functionality)	Planning Year Cost	2015 - 2017	2017 - 2019	2019 - 2021	2021 - 2023	2023 - 2025	2025 - 2027	2027 - 2029	2029 - 2031	2031 - 2033	2033+
3	4	68	Tokio (EB)	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	69	Tokio (WB)	NA	No project / action required.	NA	3-NA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	67	Kettle Falls	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	6	52	Cle Elum (EB)	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	6	92	Peshastin	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	3	42	Toppenish	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	8	Mobile	Purdy	NA	No project / action required.	NA	3-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	94	Rock Island	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	Mobile	Othello East	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	4	Mobile	Othello West	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Quincy 2 - NB	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Rock Island - Old	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Winchester	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	3	47	Rim Rock/Naches	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	5	83	Woodland	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	20	Brady (EB)	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	19	Brady (WB)	NA	No project / action required.	NA	2-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	6	Mobile	Quincy 1	NA	No project / action required.	NA	1-NA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	82	Menlo	NA	No project / action required.	NA	1-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	8	13	Forks	NA	No project / action required.	NA	1-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total									\$0	\$200,000	\$1,251,000	\$1,239,000	\$1,111,000	\$1,280,000	\$901,000	\$1,754,000	\$0	\$0

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CHAPTER 7: Strategic Plan Updates

Overview

The Chapter defined how this Commercial Vehicle Enforcement Systems (CVES) Strategic Plan and process should be initiated, maintained, and administered on an ongoing basis. The Strategic Plan presents a methodology for assessing preservation and improvement needs at the existing CVES facilities, identifying the need for new facilities, and identifying and prioritizing projects needed to meet the preservation and improvement needs. The result of the methodology is a Preservation Program (PP) and Improvement Plan (IP) which when implemented will facilitate meeting the mission of commercial vehicle enforcement in the State of Washington (**Chapter 2**). Successful implementation of the Strategic Plan requires that Washington Department of Transportation (WSDOT) and Washington State Patrol (WSP) work together with the State Legislature to implement as much of the initial phase as possible, and then based on actual implementation and new and better data, follow up to revise and update CVES activities on a biennial basis. WSDOT and WSP will need to make implementation of the Strategic Plan and subsequent biennial review/update process an ongoing business process.

Initial Implementation

Table 7-1 spells out the initial steps to implement the CVES Strategic Plan along with associated responsibilities. It is important that actions be taken immediately to present the case to the State Legislature for taking steps needed to address Washington's commercial vehicle enforcement program. Equally important will be measuring progress towards meeting the goals for CVES using the Key Performance Indicators (KPIs) established in Chapter 2. The performance measurement system must be formally developed and the needed data compiled on a continuous basis so that metrics can be accurately tracked, reported, and used to revise the Strategic Plan.

Table 7-1: Commercial Vehicle Enforcement Systems Strategic Plan Implementation

Action	Responsibility
Explain Strategic Plan to Legislature and Staff	WSDOT and WSP
Develop Statewide Funding Program and Begin Implementation	State Legislature in Coordination with WSDOT and WSP
Develop Key Performance Indicator (KPI) Tracking Program and Establish Baseline	WSDOT and WSP
Continuously Compile KPI Data	WSDOT and WSP
Monitor KPI Performance	WSDOT and WSP

Recurring Activities and Strategic Plan Updates

The first activity that WSDOT and WSP need to conduct is an annual review of the state of commercial vehicle enforcement. This review should be a joint discussion of how well commercial vehicle enforcement is doing, starting with assessment of the KPIs. From that assessment, the two agencies can begin to identify needed actions for both the IP and the PP. The best time for this review is approximately one month before the regular yearly fall meeting for coordinating WSDOT and WSP activities.

On a biennial basis and prior to State Legislature sessions, WSDOT and WSP need to update the entire CVES Strategic Plan. This schedule will assure that logical, formalized input for maintaining and improving commercial vehicle enforcement is provided in a timely manner for the legislative session. The updated Strategic Plan will not only address the upcoming biennium budget, but provide a ten-year or greater needs assessment planning horizon that can help with long-term budgeting. This approach offers the best potential for the State Legislature to fully address CVES needs in the state budgeting process.

Table 7-2 lists the steps needed to maintain the Strategic Plan on this biennial schedule. The first five steps cover the procedural actions that update the foundational elements of the planning process. The next steps are the strategic planning actions that evaluate existing conditions and needs, determine project criticalities and priorities, develop a new biennial IP and PP, and update the CVES Strategic Plan document. The final steps are interaction with the State Legislature and funding update, followed by project implementation and continued performance monitoring.

Table 7-2: Commercial Vehicle Enforcement Systems Strategic Plan Biennial Updates

Action	Responsibility	Strategic Plan Section
Review KPIs and Targets	WSDOT and WSP	Table 2-1
Update Facility Inventory	WSP	Appendix B
Update Needs Assessment	WSDOT and WSP	Chapter 5
Identify Projects	WSDOT and WSP	Chapter 5
Update Improvement Costs	WSDOT and WSP	Appendix F
Revise Criticality Factors and Weights	WSDOT and WSP	Table 4-1
Update Facility Condition and Functionality Ratings	WSP	Table 5-4
Conduct Criticality Analysis	WSDOT	Appendix D ⁽¹⁾
Conduct Project Prioritization	WSDOT	Figure 6-2, Figure 6-3, Table 6-1, and Table 6-2
Update Improvement Plan and Preservation Program	WSDOT and WSP	Table 6-3 and Table 6-4
Updated CVES Strategic Plan Document	WSDOT	Entire Document
Present to State Legislature and Update Statewide Funding Program	State Legislature in Coordination with WSDOT and WSP	--
Implement Projects and Continue Performance Monitoring	WSDOT and WSP	--

⁽¹⁾ ArcGIS application

Commercial vehicle enforcement is an important statewide activity that ensures safe operations, protects infrastructure, and promotes economic activity. By its nature, it is complex involving skilled personnel interacting with ever-increasing technology for size and weight enforcement, and safety inspection. Inevitably, the approach to commercial vehicle enforcement must evolve and improve as both the state's needs for commercial vehicle enforcement and the tools to provide enforcement change over time. In short, commercial vehicle enforcement requires an ongoing commitment of all three key players: WSDOT, WSP, and the State Legislature.